

Florida

Fishing • Hunting
• Conservation •
Outdoor Recreation

The Friendly Gallinule
Fresh Water Shrimp

WILDLIFE

AUGUST 1967

The Florida Magazine for all Sportsmen

25 CENTS



Wallace
Hughes

Florida Wildlife Scrapbook

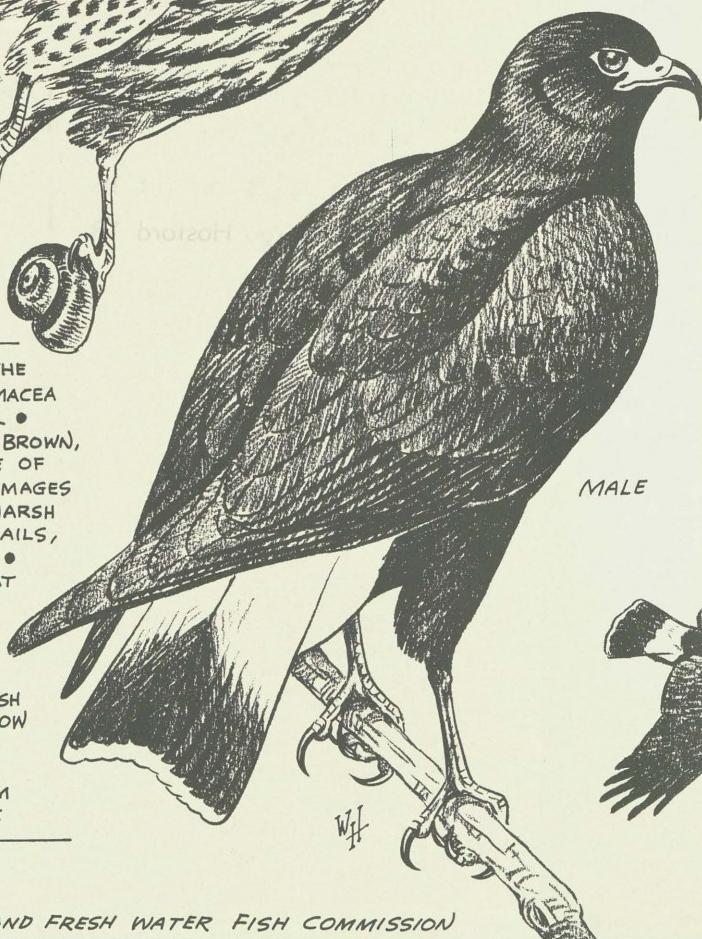


IT FEEDS SOLELY ON THE FRESH-WATER SNAIL-POMACEA
• ADULT MALE - BLACK • FEMALES AND YOUNG - BROWN, STREAKED BELOW • BASE OF TAIL WHITE, IN ALL PLUMAGES • FLIES LOW OVER THE MARSH GRASS IN SEARCH OF SNAILS, BILL POINTED DOWNWARD • OFTEN SEEN SOARING AT HIGH ALTITUDE DURING THE HEAT OF THE DAY • VERY TAME • NESTS ARE PLACED IN AN ISOLATED CLUMP OF MARSH VEGETATION, OFTEN WILLOW TREES • EGGS NUMBER 3 OR 4 • NESTING SEASON EXTENDS FROM JANUARY TO MID-JUNE

FLORIDA'S OWN, THE - **EVERGLADE KITE**

IS ONE OF THE RAREST BIRDS IN THE UNITED STATES
• LESS THAN 20 ARE KNOWN TO EXIST • THESE ARE FOUND IN FLORIDA - PRIMARILY IN LAKE OKEECHOBEE AND CONSERVATION AREAS 1, 2 AND 3
• HUNTERS AND FISHERMEN FREQUENTING THESE AREAS SHOULD MAKE EVERY EFFORT TO PROTECT THESE UNUSUAL AND BEAUTIFUL BIRDS •

REFRAIN FROM SHOOTING ANY HAWK-LIKE BIRDS
• DO NOT DISTURB NESTS OR REMAIN IN THE VICINITY OF A NESTING SITE AS THESE SENSITIVE BIRDS ARE QUICK TO DESERT THEIR NESTS IF DISTURBED



- FLORIDA GAME AND FRESH WATER FISH COMMISSION

Florida WILDLIFE

AUGUST 1967

official publication of the
Game & Fresh Water Fish Commission
State of Florida



Publications Department

BILL HANSEN Editor

WALLACE HUGHES Art Director

GENE SMITH Editorial Assistant

C. L. SATTERFIELD Circulation

In This Issue

The Black Skimmer	Wallace Hughes	6
Traitorous Tree Guest	John Fix	12
Fresh Water Shrimp	Art Hutt	14
Friendly Gallinule	Margo Hosford	18
Drainage, Drought and Bass	Charles Waterman	22

Departments

Conservation Scene	4
Fishing	9
Game Management Notes	27
Fish Management Notes	28
Muzzle Flashes	29

The Cover

It is difficult for a "once only" glance at the Black Skimmer, with its odd shaped red and black bill, plus low-level "skimming" flights. A year-round Florida dweller, the Skimmer is a graceful aerialist despite an off-balance appearance. See page 6.

From A Painting By Wallace Hughes

FLORIDA WILDLIFE is published monthly by the Florida Game and Fresh Water Fish Commission, Tallahassee, Fla. Single copy price, 25¢. Subscription rates: 1-year, \$2.50; 2-year, \$4.75; 3-year, \$6.25. Change of address should be reported promptly. The Commission assumes no responsibility for unsolicited manuscripts and illustrative materials. Permission is granted to reprint text materials, EXCEPT for advertising and commercial purposes, provided full credit is given FLORIDA WILDLIFE, and contributors. Clearance must be made with photographers and artists to reproduce illustrations. Entered as Second Class Matter Nov. 8, 1947, at the U.S. Post Office, Tallahassee, Fla., under the Act of August 24, 1912.

Copyright 1967 by
Florida Game and Fresh Water Fish Commission
Tallahassee, Florida 32304

ROSE



TALLAHASSEE

COMMISSION

W. T. McBROOM, Chairman
Miami
Everglades Region

W. B. COPELAND, Jacksonville
Northeast Region

DR. RICHARD H. SCHULZ, Marianna
Northwest Region

HAROLD W. ASHLEY, Melrose
Central Region

JACK CLIETT, Wauchula
Southern Region



ADMINISTRATION

DR. O. E. FRYE, JR., Director

H. E. WALLACE
Assistant Director

JOEL MCKINNON
Administrative Assistant

JOHN W. WOODS, Chief
Fisheries Division

JAMES A. POWELL, Chief
Game Management Division

BRANTLEY GOODSON, Chief
Law Enforcement Division

JAMES T. FLOYD, Chief
Information-Education Division



RHETT McMILLIAN, Chief
Communications Division
Federal Communications Bldg.
New Smyrna Beach, Florida



REGIONAL OFFICES

Northwest Region
T. L. GARRISON, Manager
226 Airport Drive
Panama City, Florida 32402

Northeast Region
ROBERT BRANTLY, Manager
P.O. Box 908
Lake City, Florida 32055

Central Region
J. W. BICKERSTAFF, Manager
2520 E. Silver Springs Blvd.
Ocala, Florida 32670

Southern Region
J. O. BROWN, Manager
2202 Lakeland Hills Blvd.
Lakeland, Florida 33801

Everglades Region
LOUIS F. GAINY, Manager
551 North Military Trail
West Palm Beach, Florida 33406



CONSERVATION SCENE

Wildlife Directors Seek Aid For Alligators

THE SPORTSMEN of this country have earned a formidable reputation, in Washington and the state capitals, for their effective opposition to legislation that would impair their best interests. This is especially true of proposed laws that would unduly restrict the ownership and use of firearms.

One result of this is that our legislators tend to run scared where firearms legislation is concerned. Some of them are reluctant to vote for *any* gun bill, no matter how reasonable, lest they get clobbered by the sportsmen.

Now before the Congress are two bills, introduced by Senator Hruska of Nebraska. S.1853 would amend the Federal Firearms Act. The companion bill, S.1854, is to broaden the National Firearms Act, better known as the "machine gun law," to cover "destructive devices" such as bazookas and anti-tank guns.

Both of these bills are, in principle, what the sportsmen of this country—the thinking ones, that is—have been asking for. Senator Hruska's bills contain provisions that have been endorsed by the National Rifle Association, National Wildlife Federation, Izaak Walton League, as well as several industry trade associations.

Now is the time for sportsmen to demonstrate their maturity by supporting this reasonable and constructive legislation.

If every sportsman who wrote to his Senators and Congressman to oppose the Dodd bill would write again, urging passage of the Hruska measures, they'd soon be enacted into law.

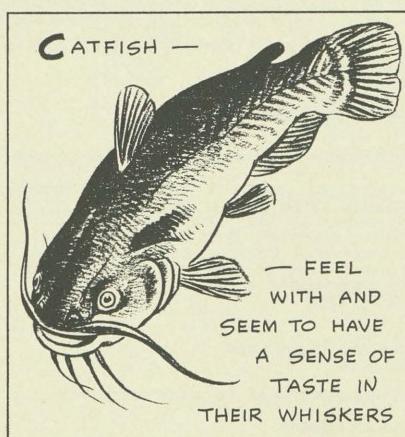
Waterfowl Breeding Report

WATERFOWL HUNTERS will be delighted to know that the prospects for a "good to excellent" duck breeding season were reported by Ducks Unlimited (Canada) in a late spring announcement. This should mean another good hunting season.

The brightest spot in the prairie waterfowl picture was in the Province of Alberta where habitat conditions were excellent and breeding populations were comparable to the high levels of the mid-1950's, according to the report.

Surveys completed by Ducks Unlimited revealed increases in breeding pairs of all species in Alberta and Saskatchewan but slight decreases in Manitoba.

Nature Notes



Water conditions were described as "generally good" in Saskatchewan with habitat being abundant.

Generally, nesting was in full swing, conditions were good and the danger of storms had passed. The prospect was bright for increased waterfowl production this year.

Valuable Native Wildlife

DIRECTORS of fish and wildlife departments in 15 southern states are asking Congress to help prevent the further decline of the American alligator, according to the Wildlife Management Institute. The interesting and valuable animal, now on the list of rare and endangered native wildlife, is protected by law over 95 percent of its natural range. But still the alligator declines.

Poaching is the principal reason for the animal's decline. Unscrupulous hide buyers purchase alligator hides wherever poachers are active and ship them to tanneries in America, Japan, and elsewhere. They often are shipped under falsified bills of lading in interstate commerce, the wildlife chiefs say.

The scarcity of alligators drives the hide prices upward, with the result that poaching is intensified. Helicopters and airboats permit violators to easily penetrate the largest swamps and marshes. Hides are selling for \$6.50 a foot today.

In a resolution passed by the Southeastern Association of Fish and Game Commissioners, Congress is asked to act promptly
(Continued on page 32)

Everglades National Park

Water Agreement Reached

FLORIDA AND federal authorities have reached agreement on a plan to protect Everglades National Park from salt water intrusion, according to the Wildlife Management Institute. Conservationists caution that it is only a temporary solution to a serious problem that has been vexing the National Park Service. A permanent solution is yet to be found.

The threat to the park comes from a canal constructed along the northern line of its eastern extension. The canal is complete except for the removal of a narrow plug of earth that separates it from sea tides. Once the plug is removed experts predict that high tides would run up the canal and overflow into the lower park land. The natural drainage of the park land would result in the salt water moving across it, to the detriment of plant and animal life dependent on the flow of fresh water.

Under the agreement, a new plug of earth will be placed in the canal and gated culverts will be nearby to facilitate the flow of fresh water from inland Florida into the sea. It is expected that the gates will be closed most of the time, thereby forcing the flow of fresh water through openings in the canal wall across the park. The gates will be operated to prevent flooding of lands north of the park, and the plug may be removed in times of extremely high water. It also may be removed temporarily to permit the movement of barges.

A second provision of the agreement calls for the Corps of Engineers to design a gated structure, or lock, to replace the combination of earthen plug and culverts. This structure would not be constructed, however, until its economic need has been demonstrated.

Migratory Game Bird Hunting Season
Dates and Information on Page 30

Progress Never Stopped

Dimensions of Conquest

By ERNEST SWIFT
National Wildlife Federation

BY THE END of the Fifteenth century, the medieval darkness of Europe was being pierced by faint rays of human hope with the revival of arts, literature, science and the crafts. It was the beginning of the Renaissance. Kings still held tenure by Divine Right, crafty intrigue and judicial murder, but an arrogant and jealous land nobility was still a constant challenge to any central powers. Knighthood was still in flower, though waning, and wars of pillage and extortion were the accepted way of life.

The Crusades were over. There were for the moment no easy worlds to conquer—so kings and nobles preyed on each other. Tradesmen and money-changers were increasing in power and importance as useful adjuncts to the convenience and ambitions of the ruling classes; but the masses, the peasants and serfs, still groaned under the ancient miseries of man, the brutalities of a fading feudalism, unbearable taxation and periodic famine. Disease was no respecter of rank, and all classes were reduced by chronic plagues.

In England men were beginning to dream of self-government and a Parliament; pontiffs and peers could smell the breath of anarchy in the air. Prophets were challenging the powers of the Roman Church and being pilloried for their temerity. The philosophies of the ancient Egyptians, Greeks and Romans were being searched out and translated; new Bibles were appearing from hidden cloisters and surreptitiously passed from hand to hand. Man was stirring after long decades of lethargy, of superstition and serfdom to grasp another rung in his climb to social enlightenment.

On October 12th, 1492, Rodrigo-de-Triana, on the Pinta, along with the Santa Maria and Nina, sighted a landfall—it was an island of the West Indies. The time was two o'clock in the morning, and at that very moment the greatest epic in recorded history began to unfold.

Even the most optimistic visionaries had no concept of the scope and magnitude of things to come, nor did they realize that forever after, life on this globe would never again be the same. In spite of primitive communications, the news of land beyond the Atlantic horizon spread with electrifying rapidity. The very thought smelled of adventure to the bold, to the seekers of fortunes and malcontents of nobility.

Kings, either of their own volition or prodded by ambitious advisors, assumed it their right and privilege to send ships of exploration seeking out new empires for possible plunder. Imaginative adventurers from all walks of life sought economic support to sail westward, or to practice legal piracy by waylaying ships of other countries. Times were sanguinary and barbaric, and there was little moral stigma in bloody conquest, and none at all in butchering far-off peoples to wrest from them treasures to lay at the feet of an appreciative monarch.

Before ships could go down to the sea they needed to be built and equipped. This led to a far-reaching activity in demand and

(Continued on page 34)



Plumage of the male and female Black Skimmer is alike; the male is noticeably larger in size.

The Black Skimmer

Photos By Wallace Hughes



Black Skimmer nest, above, with four eggs. While the female is on the nest, below, the male is usually nearby, standing guard.

By WALLACE HUGHES

NO ONE CAN LOOK at a Black Skimmer just once. Its odd red and black bill and its striking black and white plumage quite naturally provoke a double-take.

The unique bill—the lower part is longer than the upper and the sides are knife-thin—is used in an unusual on-the-wing feeding maneuver. A shore bird related to the gulls and terns, the Black Skimmer feeds on small fishes and crustacea. These it captures while literally “skimming” back and forth low over the water with the extended tip of the lower mandible submerged just beneath the surface. Numbers of these graceful birds are commonly seen





In various styles of flight (above and below) the Skimmer is graceful and highly maneuverable.

"skimming" together in leisurely flight. They feed mainly at night but also during early morning and late evening hours when the water is calm.

Daytime is spent sunning and resting on sandbars or along shallow shorelines, often with an entire flock facing in the same direction.

Known to ornithologists as *Rynchops nigra*, the Black Skimmer is a year-round resident of Florida's seacoasts but often visits Lake Okeechobee and other large inland lakes, where they may remain for weeks. It is a fairly large bird, measuring about 18 inches in length from tip of bill to tip of tail. The wingspread measures around 46 inches.

The Skimmer nests in colonies, preferably on deserted islands or isolated shorelines along causeways, on the Gulf and Atlantic coasts. Nesting begins about the first week in June when the female lays 4 or 5 eggs in a simple bowl-shaped depression in the sand. Her eggs are about the size of bantam chicken eggs and are pale buff or bluish in color, with brown spots.

The voice of the Skimmer is distinctive. One note is a loud, low-pitched, unmusical but resonant "auw," uttered singly or in series. The call notes of a flock in flight has been likened to the yelping of a pack of trail hounds. ●

Photos By Lovett Williams



Wildlife Officer Notes

FOUR ALLEGED game law violators, three veteran wildlife officers and a Game Commission pilot showed six new wildlife officer trainees what it's all about one night a few weeks ago in a north Florida county.

The new officers, mid-way through a training school at the Florida Law Enforcement Academy, Tallahassee, were Wayne Pennington, Glenn Battalion, Lee Boyd, Powell Adams, Bobby Corbin and Larue Sutliff. On this night they were to accompany Wildlife Officers Roy Sanders, Billy Smith and Willard Beville on routine night patrol. Chief Pilot Forrest Neujahr was scheduled for night flying to assist in spotting any illegal "jack-lighting" activity.

After being briefed and assigned to the experienced officers by Lt. Rhodus Hill, the trainees departed from the academy. It was about 8:30 P.M. And it was Saturday night.

Within an hour the officers were in business.

A vehicle was spotted from which a light was being shined along the roadside—a method commonly used by deer and alligator hunters engaged in illegal night hunting.

Several officers responded to Wildlife Officer Smith's routine call for assistance but the two men in the suspect vehicle were arrested without incident.

In their possession was a headlight and an automatic rifle, which, with their earlier actions, was sufficient basis for charging the pair with possession of a gun and light at night for the purpose of taking wildlife.

They were transported to the county jail where each posted a bond of \$100.

While this case was still being discussed among the officers, another was in the making.

A radio call from Beville alerted Sanders to a suspicious looking vehicle headed his way. It was 11:00 P.M. Both officers, with their "students," then located the vehicle in question, concealed their state cars and observed as a beam of light swept the woods and roadway from the otherwise darkened, slow-moving vehicle. This went on for some time.

A call to the roving aircraft brought Neujahr and his trainee-observer, Sutliff, who is a new commission pilot. Neujahr confirmed that the light was indeed being "worked" in a manner normally used by "jack-lighters" to locate deer. It was enough to go on.

At about 1:30 A.M. the officers stopped the suspect vehicle, again without incident. The driver was a Floridian; his two companions were Georgians. They were found to be in possession of two



Photo By Gene Smith

Not all Wildlife Officer trainee time is spent in the classroom but instruction must precede actual patrol. Lt. Frank Johnson teaches detection and apprehension of game law violators during June training at the Law Enforcement Academy. Six "students" saw how it works.

headlights, with extra batteries, and an autoloading shotgun loaded with number-one buckshot. After being advised of their constitutional rights, all three were charged with attempting to take deer at night with a gun and light. They, too, got a ride to the county jail, where they were held in lieu of \$500 bond each.

They were also informed that their gun, headlights and the 1966 Ford Bronco being used in the violation were being seized as evidence and that confiscation procedures would be filed under authority vested in the Commission by Florida Statutes 372.99 and 372.0100.

These relatively new statutes, while imposing tremendous inconvenience and financial loss, effect only the greedy—those who hunt illegally for personal gain. The measures have given the Florida wildlife officer an effective weapon for combating the more serious offenders—those who illegally take deer or turkey out of season and those who hunt them at night.

And so it went that June night.

For the veteran officers it had been just another long, sleepless night's work. For the new men, however, it was an interesting and valuable introduction to their potentially dangerous profession; their first lesson in the actual detection and apprehension of persons who would attempt to rob Florida of her valuable wildlife resources.

It was a good lesson and a serious one. It could not have been taught from a book. ●

Outdoor Fitness

New publication deals with outdoor health programs to keep
in physical shape for fishing and hunting activities

By CHARLES WATERMAN



SERIOUS ILLNESS because of over-exertion on occasional hunting or fishing jaunts is a constant bugaboo for sedentary souls who are wont to charge forth into the tall and uncut with no physical preparation.

Few hunters or fishermen are willing to undergo a training program for what isn't considered an athletic pursuit, even though it can be hard work.

Numerous articles have been written on the methods you should use in preparing for extended fishing or hunting trips and though not many souls are saved there are a few outdoorsmen, especially of advanced age, who undergo some sort of training to keep in shape for their chosen outdoor hobbies.

Most men under 30 can get by on outdoor pursuits without any special attention to physical conditioning. I'm not talking about intensive mountain goat hunting, or all-day SCUBA diving, but about the usual exertions of camping, fishing and hunting.

I ride a bicycle for most of my own training since I found calisthenics can be pretty dismal after a

few years. I'm in my fifties and I find that five miles a day on a bicycle will keep me from getting too fat if I use some judgment at the dining table. When I plan on something especially taxing I may take a month or two of more vigorous exercise including the despised calisthenics.

The truth is I'm sneaking in a lot of my own opinions before doing a little review of a new book, *OUTDOORSMAN'S FITNESS AND MEDICAL GUIDE*, by Lawrence Galton, an Outdoor Life book from Harper and Row, New York.

This work gives excellent coverage to first aid, diet and survival and outlines a program of exercises which if followed for about an hour a day should keep you in shape for almost any kind of hunting or fishing not excluding bare-handed bear wrestling.

However, from my personal experiences with hunters and fishermen of more than 35 years of age, I think the course of exercises starts out very steeply. While warning his readers not to overdo it, Mr. Galton has laid out a program that, in my opinion, would send the Green Bay Packers to the showers. A couple of athlete friends of mine agree with me so I'm not the only sissy in the audience.

For example, six minutes of the exercise hour during the first days of training is taken up in stationary running and astride jumps without pause. Other endeavors are of similar intensity and one youthful friend of mine (a fair-to-middling halfback) commented: "He's gotta' be kidding!"

Except for that, the book is highly valuable. It has a lot of common sense outdoor tips and goes into detail on a couple of recently developed survival stunts.

It also puts the isometric exercise fad in its place with the comment that isometric workouts will do the job but not so easily or quickly as over-enthusiastic exponents will have us believe. Mr. Galton also makes sense on the diet business, warning against fads and seeming to advocate a simple re-

(Continued on next page)



Some kinds of fishing can require good physical conditioning. Dragging a boat from one canal to another will often turn into real rugged work.

(Continued from preceding page)

duction of food intake as a slimming program. He describes in detail the drownproofing method for non-swimmers.

From now on I express opinions of my own so don't blame Mr. Galton.

Well, most fishing is a mild exercise. For anyone in good health I think wading, rowing, paddling and casting are worthwhile pursuits. As I've said before I think there are physical dangers in cranking too long on an obstinate outboard motor (not so common these days) or in lifting said motor on and off transoms.

I believe many persons suffer from overdoing it, even just staying in a fishing boat for too many hours at a stretch. I know that 10 hours of steady casting will wear me to a frazzle.

I am sure that getting up at an unusually early hour is likely to upset the routine of many folks and make them get tired quicker than ordinarily and I find that noontime naps are apt to turn into 3-hour snoring contests among eager beaver friends of mine.

I'd like to comment on the "drownproofing" method widely advertised lately and well explained in the Galton book.

The idea is simply that a non-swimmer can take a breath, hold it and allow himself to lie relaxed and motionless in the water. Probably he will float or, at worst, go down for only a short distance. When it becomes time to breathe again, he makes a couple of movements with his arms and legs, gets his mouth above the surface and takes in more air. (The book we've discussed shows this procedure in excellent illustrations.)

Although the method has been widely advertised as salvation for "non-swimmers," if this ain't swimming I don't know what it is. But that's all right. If anybody can be taught to swim that way it's certainly a good thing.

However, the fault of the wonderful drownproofing method (nothing's perfect) is simply that it would require practice under favorable conditions before a "non-swimmer" could make it work.

Spectacular demonstrations have shown that all sorts of people can be readily taught to get by for long periods with this method, even with hands and feet tied.

The catch is that most "non-swimmers" are afraid of water and can be relied on to panic if they've had little or no water experience. If they don't panic and are willing to get into the water and relax they can probably be taught to swim as easily as they can be taught to float.

Okay, take my case. I have spent a lot of time in water but am a very poor swimmer, being unable to control my breathing satisfactorily. If you break this down it probably amounts to "being afraid of water." Consequently, even when in good physical condition, I could not swim for a long distance.

For me, the "drownproofing" method is very simple in a quiet pool but I am afraid that if I got tired of swimming and adopted it to rest in an emergency things might not go so smoothly, especially if the water was choppy. I fear that I might panic or give up if I got a good swallow of water while trying to breathe and knowing all the time I was near exhaustion.

Anyway, drownproofing is worth a try.

I'VE BEEN ASKED several times about an electric-powered spinning reel for light tackle use. A 3-speed one is now marketed by Old Pal, Inc., a subsidiary of Woodstream Corporation, Lititz, Penna. 17543.

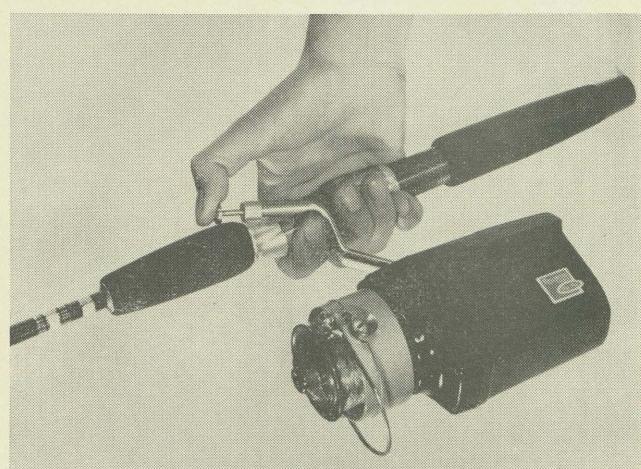
I have never actually fished with one. Casting is the same as with ordinary open-faced reels but the retrieve is electrical and can be made at three speeds with a single button as the control. The rechargeable battery is said to last for 12 hours of operation. The whole works weighs 26½ ounces and costs around \$150.

Although this may appeal to some fishermen who simply don't want to bother with hand cranking I think its main use is for persons unable to crank for physical reasons.

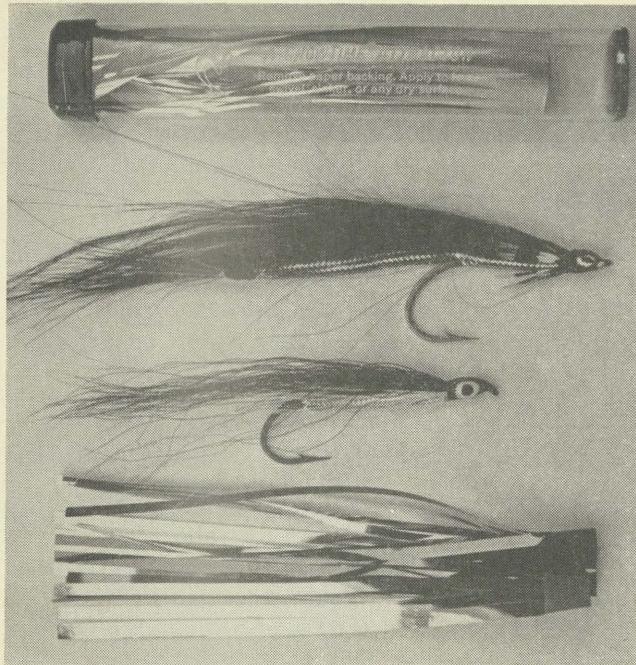
Older retired persons frequently inquire about such labor saving devices and there are some real gadget lovers who will go for it just because it's fun to fool with.

Electric reels have been in use for a long time on commercial fishing boats where the object was to get lots of big fish aboard as quickly as possible. They have also been used on heavy sportfishing tackle employed offshore.

It is my guess that an electrical light tackle spinning reel will have very limited appeal other than



The electric spinning reel, made by Old Pal, eliminates the job of manual hand cranking, and gets pretty close to complete automation level for light tackle angling.



Durable shiny Mylar works on all sorts of lures and can be purchased in skirt form, at top, as packaged by Chow Time. A skirt ready for application is shown at bottom. The long fly is a salt water number dreamed up by Frank Woolner, editor of Salt Water Sportsman, and the small fly is from Dan Bailey's Fly Shop, Livingston, Montana.

as a novelty and we'll wait and see if there's enough demand to make manufacture worthwhile.

MYLAR, A TINSEL-LIKE material, has proved very satisfactory in adding glisten and glitter to fishing lures and flies. A year or two ago I wrote about it when it was relatively new in the fishing business.

Its advantages are that it does not lose its shine, even after prolonged use in salt water, that it is pretty tough stuff and that it is quite light in weight (important to fly casters).

Lefty Kreh, manager of the Miami Metropolitan Fishing Tournament, was telling me the other day that he uses it on nearly all of his salt water streamers. Lefty is a top-notch fly fisherman with a penchant for big fish.

Hollow tubes of Mylar have been used successfully as bodies for streamers and weighted bucktails. When used as part of a streamer the strips should be kept very narrow to avoid wind flutter (which builds up a casting drag).

Chances are the stuff will be widely available before long. In the meantime please don't write me on the subject as I have no established source of Mylar strips or tubing.

If you want Mylar skirts (which could be cut up for other uses if desired), there are some good ones sold by the MacAllister Company, Inc., 5710 West 36th St., Minneapolis, Minn., 55416 and called Chow Time Attractors. They come with their own adhesive and can be stuck to plugs or jigs in several colors. I think Mylar is here to stay. ●

Florida State Parks



Camping Programs

CAMPERS AT TWO Florida State Parks are being entertained and educated at the same time.

Rangers at Hillsborough River State Park near Zephyrhills and Highlands Hammock State Park near Sebring are presenting special "evening camper programs" about their parks' plant and wildlife, using actual park flora and fauna as living illustrations.

These are no dry lectures—the rangers give amusing and interesting spiels on each subject. Here, the outdoor enthusiasts who have enjoyed the parks' recreational facilities during the day can learn about the nature side of the woods in which they are camped—why alligators should be protected from poachers, how air plants grow in trees, what makes sand dunes, and a host of other subjects.

The public is responding in a way that the park rangers who initiated the idea never even dreamed of. What began as impromptu, informal sessions around an evening campfire has mushroomed into overflow crowds at the camper shelter buildings.

Drawing on the combined experience and education of staff members, the parks are able to present shows on such subjects as local animal and plant life, geology, conservation, archaeology, Indian lore, and history of the surrounding vicinity.

Hillsborough River State Park offers the shows every night. The five park "interpreters" augment their talks with slides and movies, as well as the live exhibits. In addition, guided nature walks are available to campers on Saturday and Sunday mornings, and unfold the story of ecology and plant succession, while giving the participants a first-hand knowledge of nature.

At Highlands Hammock, the programs are presented on weekend nights only. Park rangers report they often find themselves with crowds of 400 people on hand. As word of the programs spread, rangers report, local residents asked to join the group.

State Parks Director Bill Miller says, "I'd like to point out that personnel in these parks are doing the programs on a volunteer basis and in addition to their full-time duties. They should be commended for what is really a labor of love on their part, and a source of enjoyment and education to park visitors." ●

For complete information about all
State Parks, their facilities and
available camping areas, write to:
Florida Board of State Parks
101 West Gaines Street
Tallahassee, Florida 32304



The strangler fig, at left, has completely destroyed its host, but additional tenuous roots continue to grope downward. The seedling fig, right, with leaf cluster about six inches in diameter, has already put out its aerial roots and gripped the rough bark of Sabal Palmetto.

Traitorous Tree Guest



THE ACTORS in the western dramas that clutter our television screens fall neatly into two categories: The Good Guys and the Bad Guys. The same thing holds true for the plant world. There are plants which are good and others that are mean and vicious and cruel. Among the latter is South Florida's *Ficus aurea*, the Strangler Fig—the Killer of the plant world.

Ficus aurea is a native of the American subtropics. It is found in abundance everywhere in South Florida, in sizes from the tiny seedling just starting its murdering career to the magnificent full-grown *Ficus*, towering 60 feet into the blue Florida sky.

The leaves of the *Ficus aurea* are thick and leathery, four to six inches long and they narrow at each end. They are a shiny dark green on top but have a lighter, downy underside. If you tear these leaves or lay bare the rough bark of the tree, it will exude a whitish, sticky sap that accounts for the *Ficus'* common name, Rubber Tree.

The *Ficus aurea* has aerial roots. These start as simple, hair-like feelers but soon they thicken and attain considerable length. When they encounter the ground, they embed themselves and become

secondary trunks of the tree. In this they are similar to the banyan tree to which *Ficus aurea* is closely related. Single specimens of banyan trees in their native South America have been known to cover several acres.

A member of the fig family as are all *Ficus* trees, it bears fruit—small, fleshy globe-like capsules—which while not edible closely resemble the figs of commerce. Inside each capsule is concealed a blossom of the tree. And the method of pollinating these blossoms so that they might produce seeds is one of the marvels of nature. At the bottom of each "fig" is a tiny hole. The insect which pollinates the flower must be small enough to enter the hole. There are many kinds of *Ficus* trees and each has its own pollen-bearing insect. The insect that delivers pollen to one type of fig tree will not deliver pollen to another.

South Florida would probably be completely over run by the hardy, fast-growing *Ficus aurea* if it were not for the fact that South Florida has none of the insects that will pollinate that particular fig tree. So the *Ficus aurea* is propagated by seeds dropped by birds. These seeds often cause a *Ficus aurea* to spring up in isolated splendor in an open

field. But more often the seeds lodge in the rough limestone that juts from Florida's soil or they find a haven in a rough-barked tree such as the Sabal palmetto or the Florida oak and there they come to life.

Putting out its first leaves as an *epiphyte* (a plant that draws its subsistence solely from the air), the strangler fig begins to grow roots. These are long and tenuous and out of proportion to the tiny size of the plant. But with the first roots the little seedling sheds its aura of respectability and becomes the dread strangler fig that in time will bring death to the tree in which it has lodged. The roots twine and intertwine about the host, penetrating cracks and crevices, working ever downward, depriving the victim of moisture and air and sunshine.

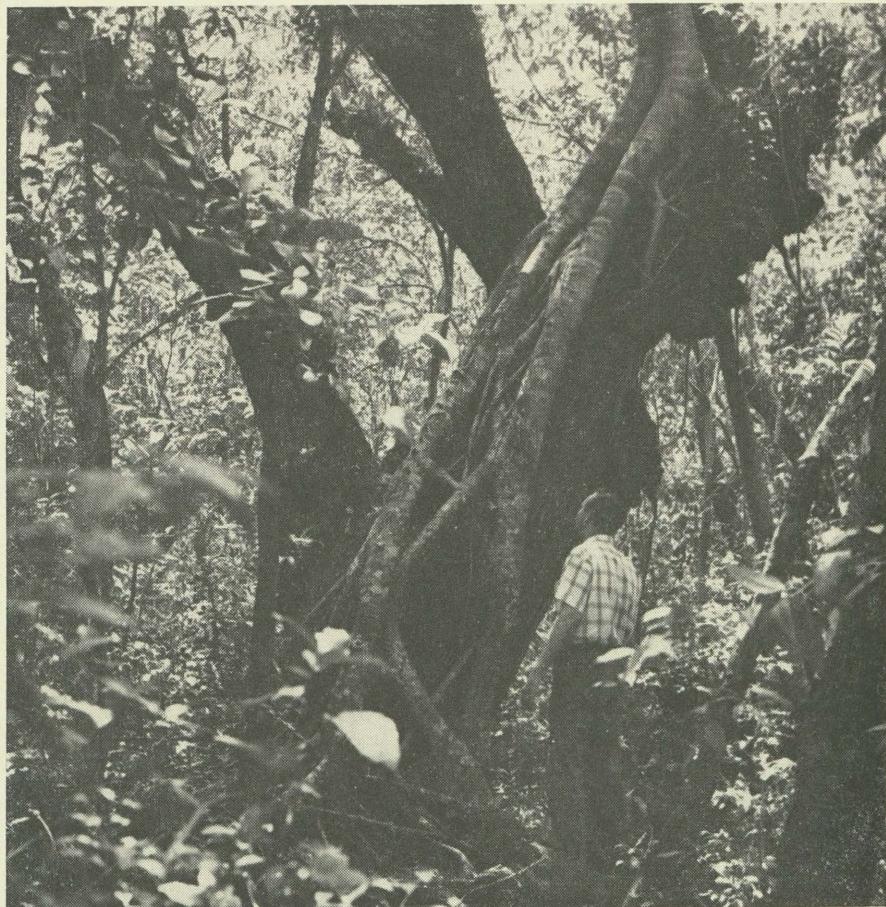
When the roots touch the soil, the strangler fig is no longer an epiphyte but a strong, independent tree towering over the victim it clutches in its deadly grasp. Slowly and remorselessly it smothers the kindly host that had supported it.

Many a mature South Florida strangler fig bears within its great stilt-like roots a hollowed-out area, preserving the form of the tree it has destroyed, a tree that has long-since turned to dust. ●

mother nature's "strangler" of the plant world

By JOHN FIX

Imbedded into a limestone wall, left, at Simpson Park, Miami, the strangler roots will eventually merge into a solid mass, if left to grow. The "strangler," right, is slowly enveloping a venerable Florida oak; the lighter colored wood is the fig.





Nearly identical to salt-water models, fresh water shrimp are important gamefish food—and as fish bait.

Fresh Water Shrimp

A fish-catching "collector's item"

BOB DINSMORE, Lake Yale Resort owner, pushed the dip net through underwater vegetation in the canal leading back to his camp. When it came up, it held a tangled mass of grass, several minnows, assorted water beetles, and a half-dozen fresh-water shrimp, their tiny transparent presence given away by their actions of ricochetting from one side of the net to the other. When they quieted down, Dinsmore flipped them into his weed-filled bucket.

"Y'know," he said, "these are the best and cheapest darn bait for bream and speckled perch. Yet hardly anybody uses them or even knows about them."

I'd be inclined to agree with Dinsmore. Even after being on the Florida fishing scene for nearly forty (ouch!) years, only in the past five have I really become acquainted with this zippy little rascal. And even then, it hasn't been an intimate acquaintanceship.

This fresh-water shrimp—also called grass shrimp—is a surprising little organism. With the exception

of a slightly more humped-back appearance, it is practically a pint-sized version of the edible salt-water shrimp. And it is apparently a staple fish food item in fresh water, just as the larger one is in salt water.

On the technical side, it is a crustacean of the order Decapoda, meaning it has five sets of legs. The family name is a mouthful—Palaemonidae, which includes fresh-water prawns and river shrimp. And zeroing in on this small beast, an aquatic biologist would list it as *Palaemonetes paludus*.

So much for the long name of a short (maximum length is about 1½ inches) bait.

But what it lacks in size, it makes up in "fish-appeal." Dangle a worm and a shrimp before an empty-bellied bluegill and two-to-one, the befuddled bluegill will blast the shrimp first, simply because this is something it is familiar with—a natural bait that it has seen before, possibly even grew up on. There are shrimp-using specialists whose strained stringers will support such a supposition.

So what is the story of this little-known, succulent morsel?

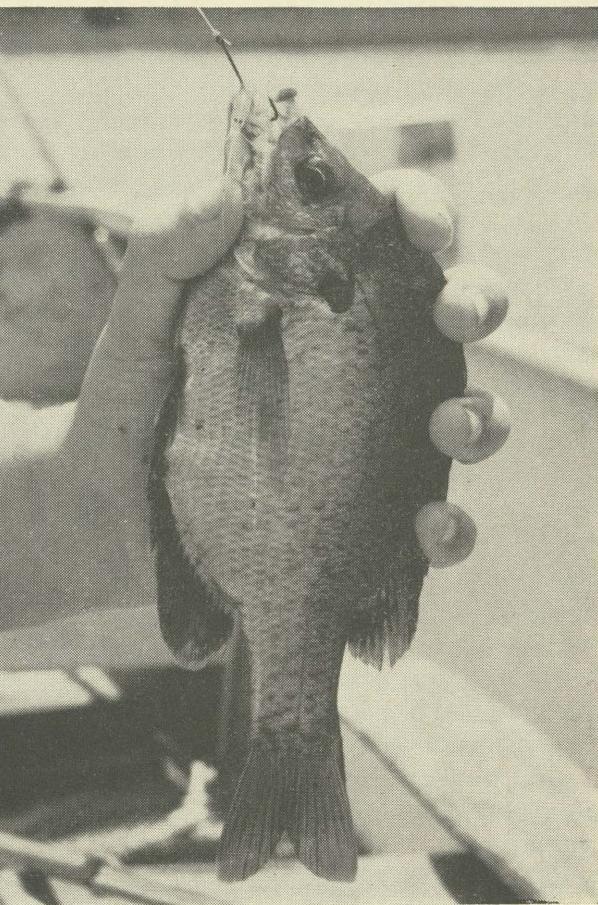
First off, it doesn't occur in every lake in Florida. It needs weeds to thrive and to hide in. Seems to me that would include nearly every lake but they may have other demands unknown to me—and others. For despite the fresh-water shrimp's importance and abundance as a basic game-fish food, it has largely been ignored by research biologists and sports writers (like myself). So, if some elements of this article sound like they're hedging on a firm statement—could be! There's just no in-depth information available.

These shrimp do have some small liking for roots and tangled plant fragments on the undersides of floating islands and there seems to be a fair population under mats of hyacinths.

But the greatest numbers are found in underwater vegetation—eelgrass is particularly good—over a sandy bottom.

(Continued on next page)

By ART HUTT



Fresh-water shrimp make ideal bait for bluegills, other bream-type fish, speckled perch, catfish and small bass.

A seine is a useful shrimp-collecting tool. A four-foot model permits one-man (or one-boy) manipulation.



(Continued from preceding page)

When a grass shrimp goes out for a stroll, it uses its walking legs (periopods) and can take off in all directions with ease—back, forth, sideways—but not all at once, of course. It swims by rippling motions of its pleopods (swimmerets). When frightened, it doubles up its tail fin and slingshots off like its life depended upon it—which frequently it does!

The grass shrimp will eat most anything but it is not regarded as a predator. Food is broken into smaller fragments by its various appendages, then passed forward for a final chewing by its mouth-parts. It appears to be most contented when munching on vegetation but sometimes turns to dead, but fresh animal-food for variety.

They'd never make the dull and routine shrimp sex story into a movie. The female passes its eggs through previously deposited sperm, then glues them with glair (a sticky secretion) to its abdomen. Instead of being "pregnant," the poor shrimp is "in berry," the 20 to 800 eggs bunched on its nether parts resembling a berry-like fruit. This usually happens in the spring. After 2 to 20 weeks of incubation, the eggs hatch. The newcomers go through several molts, then reach sexual maturity by autumn.

The exact importance of the fresh-water shrimp on the gamefish menu has never been fully determined, but the transparent speedster pops up in the biologist's gamefish food studies with regularity.

Armed with all these astonishing facts, how can the average fisherman benefit?

First off, you can find out how available locally they are to you. You'll need a net with enough

backbone to stand a little manhandling. You can make your own by taking screening, roughing a 1½-to-2½ foot frame around it, then attaching a stout handle. This will make a somewhat heavy but efficient tool. But if you are like I am and prefer the lazier route, go to a big tackle shop or to a live-bait dealer and buy what is commonly called a "bait net." While it is designed for scooping minnows or shiners out of bait tanks, it will work equally well in scooping shrimp out of the grass. A typical net would have a handle four feet long, a straight-across leading edge 16 inches long and a fine-meshed, 12-inch deep nylon bag.

Beware any dip net with a shallow bag, however, for these spring-tensioned jumpers can flip out of a shallow one in a hurry.

Or, if you prefer, a minnow seine will reap an adequate harvest, too. 'Course, you'll have to get into the water with it—which may be a drawback if you aren't the wading type.

We have one of those very inexpensive cotton ones which can be purchased in lengths of four feet and up. Fact is, I recently bought a four-footer as it can be worked by one person if need be.

With either type net, find a weedy spot and scuffle through it. Sometimes you'll see the frightened shrimp skitter. If you come up with only a few shrimp, move around a little. You'll find they're like fish, concentrated in some spots, sparse in others. Also, if my impressions are correct, they are more available on calm days and in morning-and-evening-cool water, although they can be caught at any time of the day.

Photos By Art Hutt



Fresh-water shrimp, dried in sun on absorbent paper, catch fish despite (or because of) increase in aroma.



Grass-lined canals are ideal for shrimp collecting, as Bob Dinsmore demonstrates. The small transparent shrimp are difficult to see, but flipping actions betray them.

A non-essential but most helpful ingredient in collecting shrimp for fishing is a youngster like my son, Larry. He gets more enthused about gathering the bait than he does about fishing.

Put your shrimp in a good size, weed-filled bucket to keep the little monsters happy and non-jumping.

There are probably other places where these shrimp can be purchased alive but the only place I know of is at Dick Dunphy's Fish Camp at Central Florida's Lake Yale. Dunphy stores them in a big wire cage that fits inside his boat's livewell, sells them by the handful—about 100 to 150 for a dollar.

Further up the lake, Dinsmore has put them in transparent sacks while still alive, then on refrigeration until a customer calls for them.

That's the beauty of this little bait—they seem to work equally as well whether alive or fresh-dead. And, if you don't use all the fresh-dead ones, dry them by laying them on an absorbent paper towel in the Florida sun for a few hours. I'll admit they'll gain in odor—but the fish don't seem to mind.

I don't have any words of wisdom for keeping them any length of time. Since they're constantly gilling oxygen out of the water, like minnows, they can't stand overcrowding. I've tried both solid and air-breathing buckets but can't see too much difference—with one exception.

Seems how I had a mess of shrimp stored overnight in the utility room in one of those porous jobs with a pressed Masonite lid with an inch-big finger hole in it. The water was about four inches from the top.

Something compelled me to take one more look at them before hitting the sack.

When I opened the door, the place was literally jumping with shrimp. Here the little buggers had zeroed in on that small hole and were shooting through it like launched Polaris missiles. A tiny dip net laid across their escape route put an end to their shenanigans.

The axiom for fishing with grass shrimp is to set the hook just before the fish bites. If you can't arrange it, be extra alert for any bobber bounce.

Most shrimp-using specialists (which I don't class myself as!) use an ultra-light rig—a small float, tiny split-shot, and a short-shanked hook varying from a No. 8 to a No. 14. I stumble along, satisfactorily, with a No. 8 hook.

Impale your shrimp through the thickest part of its tail, and keep an eye on that bobber. If your shrimp are especially small, two will work as well as one but doubling up usually isn't necessary. As related, you can use them year 'round for bream, bedding or scattered, and they're a hot item for perch when they're bedding. Small bass will pick them off with glee, too.

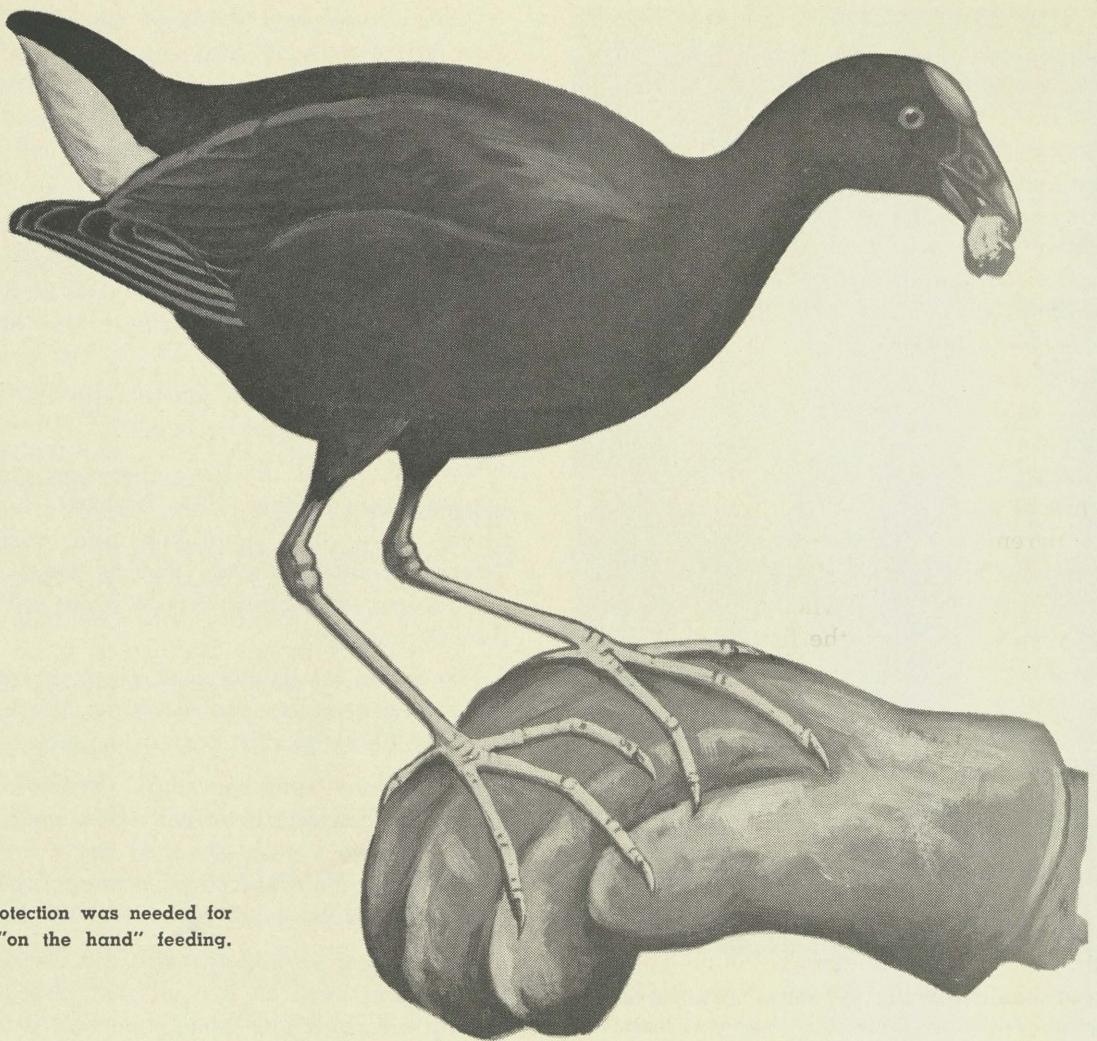
Grass shrimp are commonly used by commercial cat fishermen and it is astonishing the size catfish which are attracted to this solitary little tidbit on the hook.

And, I'm told that if things are moving too slowly for you, take a handful of shrimp and chum with them. If nothing results, you'd better go home and get out the lawnmower.

Jack Rigsby, owner of Jack's Tackle Box in Tavares, tells me he thinks the fresh-water shrimp as a bait is just starting to come into its own. More and more frequently, his customers ask for "shrimp nets," and where and how they can catch them. They've heard about how productive and how inexpensive a bait it is, but they just don't know how to get started.

And come to think of it, what other bait can you dip up at 10-to-100 per swipe?

Seems like this glimmer of interest is well-deserved but long over-due the fresh-water shrimp. •



Glove protection was needed for Petey's "on the hand" feeding.

The Friendly Gallinule

my colorful "water-walking" feathered guest

By MARGO HOSFORD

SUNSET WAS FLOODING the sky and water with a flame and amethyst "spectacular" as I headed the small boat into the narrow opening in the grass beside my dock.

Before I could ship the oars a soft flutter of wings and a raucus cluck told me that the welcoming committee was on hand to greet me. The purple gallinule who had recently adopted me was ready for his afternoon handout.

The small minnow I had saved for him was quickly dispatched. What Petey wanted—and knew he would get—was bread, soft fresh baker's bread. Having anticipated this, I had brought along two slices.

Now the small voices of the chicks could be heard as the downy black babies worked their way through the grass and water. The shy female slipped, like a wraith, into view, stopping a safe distance from the dock, where the young ones joined her.

All of this had been going on less than ten days. The first time I was aware of Petey he arrived as I was feeding minnows at the lake's edge. He flew in, his long legs dangling, looking as though he would never make a safe landing. I tossed a piece of bread, which he took eagerly. That was it—the start of an affair that was to give me a great deal of pleasure and at the same time cause me much anxiety.

Early mornings and late afternoons I would go to the lake and if he had not arrived, a few whistles and a call of "come get your breakfast (or supper), Petey," would bring him on the run.

Usually, though, he was there ahead of me. Taking the bread from my fingers he would eat perhaps two or three bites. Then, with the next piece, it seemed suddenly to dawn upon him that he had a waiting family. Dropping off the dock he would hurry to the hen, sometimes giving her the food to give to the babies, sometimes feeding them himself, allowing them to take small bites as he held the bread in his beak.

There were five chicks, but always one would lag behind hesitating to cross any open water. It would stand on a tuft of grass, calling plaintively, until one or the other parent would take food to it. At first I believed it to be a weakling and was anxious about its chances for survival. Later, when I read that gallinules start incubation when the first egg is laid, I decided that this must be the youngest of the brood, the last to hatch.

Sometimes called "blue Pete," or "bonnet walker," the purple gallinule is as colorful as a peacock. The radiant purple of the head, neck and body, and the gleaming olive and bronze of the back, are set off by the blue, green and soft browns of the wings. In the center of his forehead he wears a conspicuous light blue disk and his heavy bill is orange-red tipped in yellow. The feet and legs also are yellow, and as if this were not enough color, his eyes are a deep red and beneath his short brown tail, which flicks constantly, there is a tuft of snowy white.

His long legs and large, gawky feet—having two-inch toes tipped with sharp half-inch claws—enable him to, seemingly, walk on water. He glides deliberately across lily pads and half-submerged grass as though on solid ground. And, though his feet are not webbed, he is a good swimmer if the occasion demands.

So at home is he in a watery world that even the nests are small island towers woven into the tops of growing marsh grasses and pickerel weed. Small bowl-shaped platforms are placed some twelve to fifteen inches above the water. Besides the nest in which the eggs are laid, gallinules may build as many as half a dozen dummy nests, which serve as resting stations. Petey and his mate built two dummy nests.

The young could not have been more than two weeks old when I first saw them. They were still in the all-black downy stage. The small black bills showed a bit of dark red at the nostrils but otherwise they looked very much like young barnyard chicks. The wings, tiny twig-like stumps, fluttered in excitement at the offer of food from the adults.

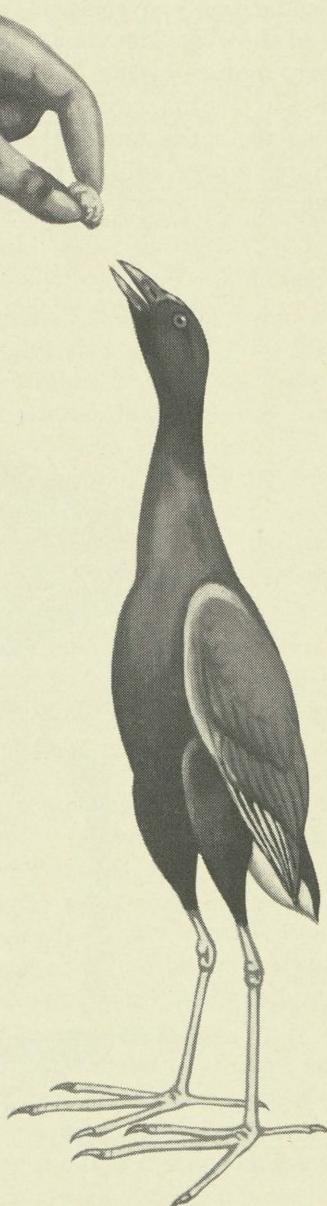
For a few days, only Petey would come on the dock but in that short time he became bold enough to snatch food from my hand, jumping high to reach it if I were slow in offering it.

One day when my attention was elsewhere, he suddenly flew up and landed on my wrist demanding instant service. I managed to keep my arm steady in spite of the painful stabs from his needle-sharp claws. After that I wore a glove to protect my wrist when I fed him.

(Continued on next page)

Pieces of soft bread became a favorite food, and Petey would stretch up high for his tasty share.

Artwork By Wallace Hughes



(Continued from preceding page)

It was over a week before the female came near me but then, in only a day or so, she also-fed from my hand. Each day the pair would feed and then preen or bathe, like ducks, teetering up and down rapidly, the chicks imitating every motion. Then they all would groom themselves, the adults spreading their wings to dry them.

One evening the adults were standing side by side and Petey was gently nibbling all over the head of his mate. Her eyes were closed and she wore an expression of such contentment as I think only one who enjoys having his back scratched could appreciate.

It was a peaceful scene indeed and one that made me wonder how these birds could survive with the lake abounding in turtles, water snakes, large-mouth bass and even an occasional alligator. They seemed oblivious to any danger.

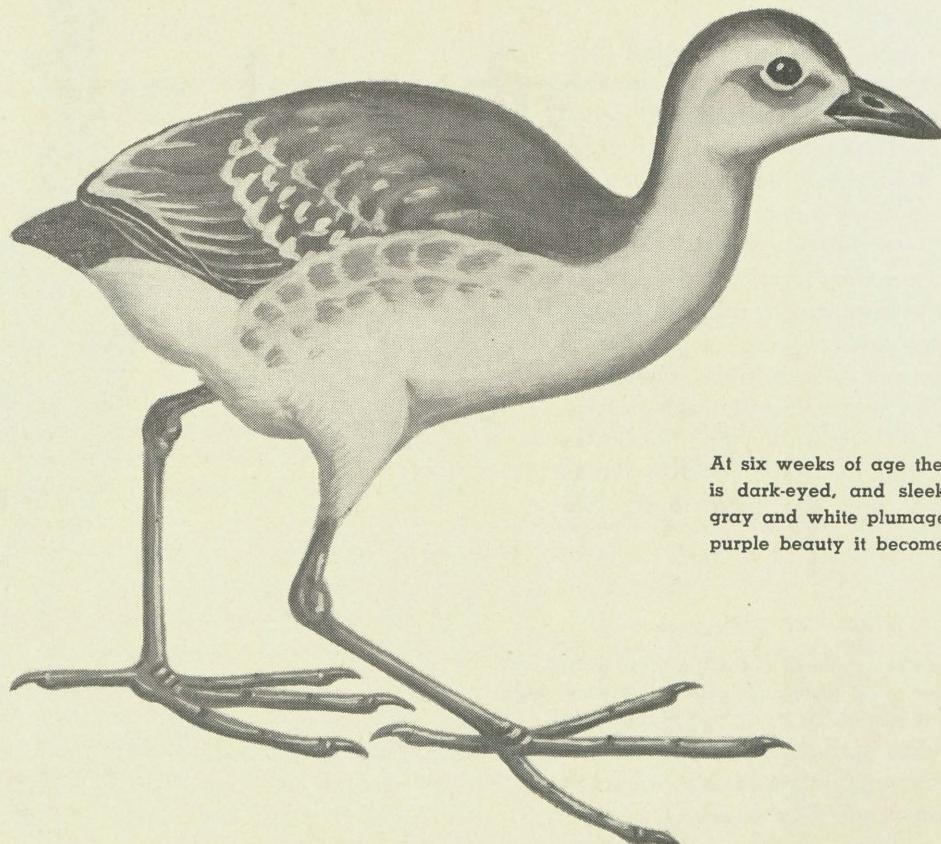
Perhaps I underestimated their wariness. A large banded water snake came late one afternoon to the shallow water near the shore, where a chick stood. The snake was just beneath the surface with only its head showing. The young bird, spying it, uttered a sharp, inquiring note. Instantly Petey was there, his harsh clucks warning the baby to stay back. Circling the snake until he was between it and the chick, he lunged at the reptile's head, sending it gliding rapidly toward deep water.

After that I did not worry so much about their ability to take care of themselves, but I was concerned that their increasing tameness might eventually lead them into danger. More and more frequently Petey would try to follow me up to the road, or would meet me half way up the steep path as I went down.

Oddly enough it was neither Petey nor the young chicks, but the shy, retiring female who met with disaster. Less than a week after she first fed from my hand she was found by the side of the road. There were no marks on her but there were tire marks nearby. She must have flown into a passing car.

That evening Petey had all five chicks to care for. It seemed to me that he was distraught and restless. He seemed to be listening for her call. Even the soft chirps of the young sounded more plaintive than usual. They stayed near the nests and Petey took bread to them. Two of the chicks climbed into a nest. They all seemed to sense something wrong in their small world.

From then on Petey took excellent care of his brood, by now about four weeks old. They were gawky, long-legged youngsters, falling over their feet now and then. They had "ferocious" mock battles from time to time but they fought briefly and without animosity, much in the manner of human brothers and sisters.



At six weeks of age the immature purple gallinule is dark-eyed, and sleek with feathers. The plain gray and white plumage gives no indication of the purple beauty it becomes when reaching maturity.

In one toe-to-toe pecking contest the slightly smaller bird lost his balance and landed flat on his little white tail, his long legs waving comically in the air. More than once I saw one young bird suddenly place his foot on the lowered head of another, duck him under the water and hold him there for a moment.

All went well with the little family for a few days. Then the fringe of a tropical storm brought the lake level up, beat the grasses down and washed away the dummy nests. Between rain storms, which lasted for two days, I went down to the lake to see if the birds were safe. Only Petey showed up and I lost hope of seeing the chicks again. But on the third day the two largest ones came, and on the next day, two more. All were accounted for except the very smallest, the one that always lagged behind. Then, twelve hours later, as the adult and the four chicks were gathered around me snatching hungrily for food, faint cries, coming nearer each moment, announced the belated arrival of the baby of the family. His progress was punctuated by loud splashes as, in his haste, he fell repeatedly into deep water. I did not doubt his ability to make it ashore for I had seen them all float like bits of fluff while still downy chicks.

Continuing to grow, the youngsters would often be on the dock, or near it, waiting for me before Petey would arrive. They trotted along behind me each time I walked from one end of the dock to the other. Petey, though he still offered them food, now took a much larger share for himself. He was slowly losing interest in his almost independent offspring.

One morning Petey obviously thought breakfast was late and he gave me a fright. Having heard me in the yard he decided to investigate. He called to me from across the road, 150 feet away, and I rushed into the kitchen for bread, hoping to reach him before he tried to cross. By the time I was outside again, he was across the road and half way up the lawn! By not feeding him I kept him under control, making him heel like a well-trained dog, until we reached the road. Waiting until there was no traffic I ran across the road, with him at my feet, and down to the dock, refusing to feed him until we got there.

The scolding I gave him probably made no impression but the barrier I placed across the approach to the dock did. It was only a fishing pole with a piece of white cloth draped over it—but it worked. He did not use that route again.

By this time the youngsters were in their sixth week, growing sleeker and more adult in their ways every day. Even their voices had changed. And Petey was becoming more arrogant and possessive of me. He had learned that a line dropped in the water meant an occasional minnow for him and his brood, and there was always danger of his snatch-

ing for it while it was still on the hook. I found it wise to keep bread in my pocket to dole out to him when he became too eager.

I usually took the bread along in a brown paper bag and all of the birds quickly learned to associate the bag with the bread. I did not dare leave it lying within their reach. At times they tried to make off with it . . . bread, bag and all.

Then one day, just six weeks after Petey's first appearance, he was gone—as suddenly as he had arrived. He had come in for the morning feeding, eaten some bread and, without much interest, had fed some to the young ones. At that feeding was the last time I saw him.

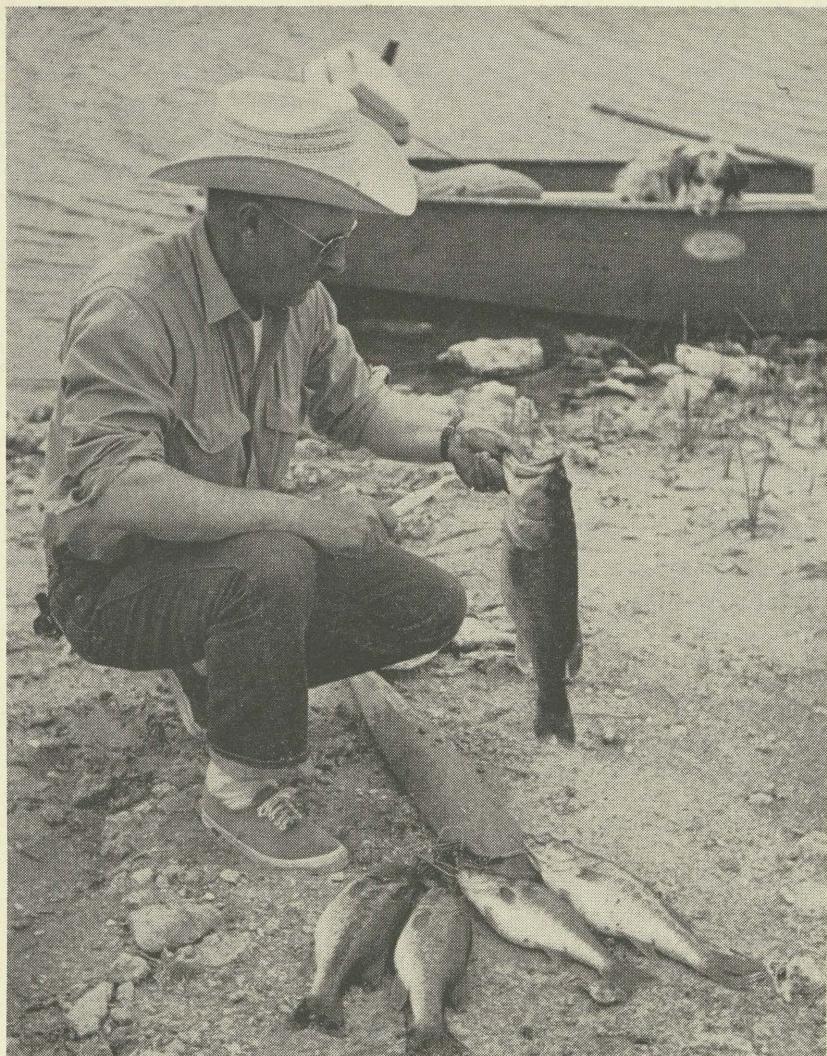
Since it was late in the season for him to look for a new mate I presumed that he had joined other adult birds to live in another part of the lake. It was the normal thing. The young were now self-sufficient and Petey knew that it was time for them to be left on their own. They continued to watch for me and to come at my call, and eventually they all became bold enough to eat from my hand just as their parents had done. They always greeted my appearance eagerly.

Then, three weeks from the day Petey left, another storm was reported approaching Florida. This one turned out to be no mere tropical storm but a full-grown and vicious hurricane. There was no way I could protect my protégés. They were creatures of the wild and I could only hope that they would find a safe harbor in which to ride out the storm.

For three days I missed feeding them but when the winds subsided I hurried down to the lake to check. The water was much higher, the grass had been whipped and battered low and the footing, even for a bird that "walks on water," was so treacherous I held little hope of seeing my friends. But after a long while I heard their voices. Only three birds appeared and it was some time before two of them came onto the dock. They ate bread but all three were obviously ill at ease. The next day only two came around and the following day, one, which stayed nearby for several days but would not again come to me. He, too, then disappeared.

I had grown accustomed to their presence, and now the lake front seemed empty. I missed having my little friends land and rush with outspread wings to greet my every arrival. And I missed hearing their feet pattering along behind me on the dock. But I knew it was inevitable that they would leave; it was as natural as it had been for Petey to go from the nesting area to join other adults of his kind.

I also knew that in all probability another spring would bring another family of these ingratiating purple gallinules to nest on my lake front, and that I would spend another summer of alternate anxiety and pleasure baby-sitting with them. ●



A nice catch of bass from an FCD canal on a day when it would have been easy to land a hundred. Later on the ditch got too low.

fishing areas are not all alike and local situations can often change—up or down and overnight—according to weather condition results

By CHARLES WATERMAN

drainage, drought, heat • . . . and Bass

THE BEST BASS fishing in the world is probably somewhere in the flood control areas of South Florida.

I can't pinpoint it better than that because it may not be where it was last week. You see the best bass fishing in the world is an unnatural thing and always has been.

When bass are well settled with an established routine they can be pretty hard to catch. It's only when they're a little mixed up that they get easy.

On several occasions early last spring I put a little boat into a canal on the Tamiami Trail (U.S. 41), motored north into the Flood Control District and caught all the bass I wanted on almost anything I wanted to use.

That location was no secret but it was about ten miles from the road and to get there you had to drag a boat across a dike in one place. Right now it

may not be good at all. The gimmick is that the canals pull from great areas of the Glades as dry weather moves in. Some canals drain from bigger and bassier areas than others—simple as that.

When my wife Debie and I went in there the first time there was still a lot of water outside the ditch. I suppose there would have been good wading areas if we'd known where but we stuck to the pee wee boat and the main canal. On the way in by another ditch we watched the limestone edges with our polarized specs and saw hundreds, maybe thousands, of small bass lying a few inches under the surface and sheltered by shore outcroppings. I'd say the biggest fish I saw would go two pounds but a teenager and a blue plastic worm accounted for a 6-pounder so there were bigger ones. Jack Horner, a fisherman from Illinois, told me he'd caught 3-pounders there on plugs.

For awhile we thought the hard-to-reach canal had nothing but small fish. Debbie was fishing with a popping bug and I was at the oars of the 10-footer and getting in a furtive cast now and then with a plugging rod. I completely abandoned my seaman's duties when I had a solid jolt on a deep running spoon. The fish was better than two pounds and I announced the plug rod would get the bigger fish all day but it didn't work out like that. Of perhaps 50 bass caught most were nine or 10-inches; probably 20 were in the pound and 1½-pound class. Several were around two pounds.

We'd made an afternoon start and we got back to the road at dark, our 6-horse motor doing the 12 miles in an hour and a half.

Fishing had been so good I spouted off to Jack

Gowdy who came along willingly a couple of weeks later. During that time the water level had fallen some more, there were more fish in the canal and we were in hog heaven. I had brought along a 9½-horse motor that halved our traveling time.

Along late in the afternoon Jack was just watching them hit his surface lures and not bothering to set the hook. That was all right with me but got a little hard on my nerves when strikes were especially vehement. We caught a number of 2-pounders, a few around three pounds and all the half-pound fish we'd bother to reel in. I've caught bigger bass but I never caught more.

All of the fish Jack and I landed were fat, healthy and full of go. Water was getting low but it was clean and dark.

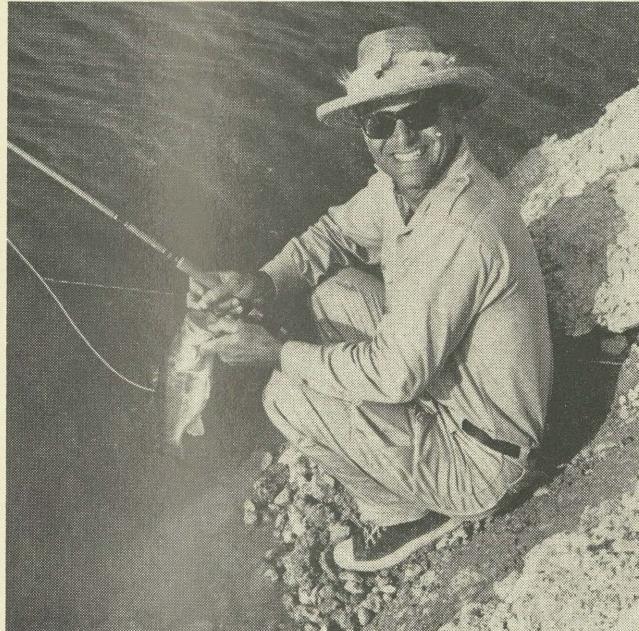
Came the middle of May and I was back with Buddy Nordmann having filled him with glowing but only slightly embellished stories of earlier triumphs. Even as we launched our pram at roadside with a watchful eye for passing over-width loads things seemed different. The water was much lower and I thought it looked just a little yellow but half a dozen 9-inch bass watched us with interest and one boatload of fishermen was already in the water.

We made our portage eight miles out and stood looking at greenish yellow water with swarms of small bass within inches of the surface.

"It's beginning to smell bad," Buddy said apprehensively.

We started catching bass immediately, mostly 9-inches. They fought over our lures; they were thin, pale and flecked with parasitic growths. Now and then we'd come up with a fish that would have weighed a pound in good condition but was now

(Continued on next page)



Buddy Nordmann, above, perched precariously to land a bass he hooked from along the bank of Alligator Alley Ditch. In the Puzzle Lake area, right, the St. Johns became scattered pasture creeks this year and wading was easy.



(Continued from preceding page)

mostly head. Small ones appeared in compact schools on the surface and there were numerous dead and dying fish. We sadly came back to the camper and went fishing elsewhere.

Such a condition can appear quickly with over-crowding and warm weather. There wasn't enough oxygen and the gamefish were competing with mud-fish, gar and algae for what was left. Rains came shortly afterward but it probably took quite a while to get the fish back in business. In some parts of the Glades there were fish kills but no damage in other areas.

Now this is no startling biological revelation but it's the key to the fabulous fishing most of us have had and a reason for a lot of fruitless trips. This particular canal was just an easily observed process that happened quickly.

A reasonable concentration of fish is what we're looking for. Then you're showing a lure to more customers and they're in a competitive mood.

Receding water is what puts them where you can get at them and the flood control ditches are excellent examples of how good fishing can get and how fast it can fold. Find a canal where they're first beginning to concentrate and you're generally in business.

Canals that stay within their banks most of the time are more consistent—and much less likely to

provide really hot fishing or have fish kills. The reason is that they have a fairly steady fish population adjusted by natural factors fitted to a food supply and residential area.

Most of these explanations fall in very neatly but I'm short on some answers. For one thing, when water falls to dangerous levels I'm not sure about the bigger fish. Short on food, the little ones may fight for a hook but the bigger fish tend to disappear. My own theory is that they save their strength, stop fighting for chow and go into semi-dormancy. I think they'll survive conditions that destroy the smaller ones. It's possible that while they may need more food for an active life they can live longer without food as long as they keep quiet and it's a sure thing that a retiring schedule will help an old lunker through thin oxygen and into happier times.

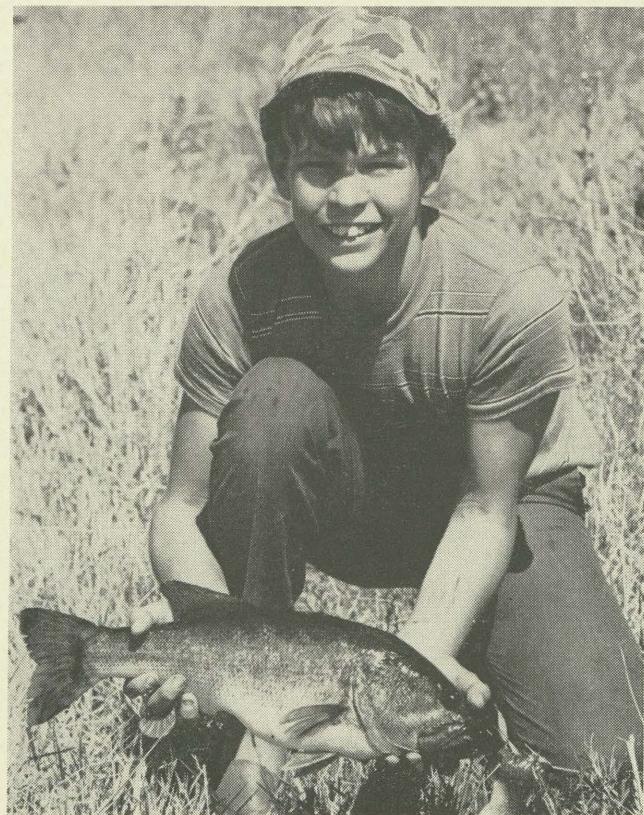
It's high waters that make for big fish populations and low waters that cut the surplus and sometimes ruin the whole works. If you can keep an eye on a couple thousand miles of canals and catch the right ones at the right point on the way down you're in business.

The same sort of thing happens in a less obvious manner in natural rivers but in the case of tidal streams it's often salt water instead of starvation or oxygen loss that does the damage.

The meeting of fresh and salt water shows up dramatically on the lower west coast where, before extensive flood control construction cut off most of the fresh water, it was always possible to catch fresh water bass in the headwaters of several streams. Of course the fishing was always better when the water was falling, thousands of bass coming out of the sawgrass sea. If a drought continued they'd end up in brackish water together with a lot of salt water gamefish, some of which were there to feed on bass. The resultant mixture would provide fantastic fishing for a while. Then if it rained the bass would go back where they belonged in fresh sawgrass water. If the drought continued a lot of them would die of excessive salinity but there have always been enough to keep the Glades stocked. I guess there are a few fresh water holes that never go dry and help keep things going.

There's seldom much bass fishing down there any more. Last spring there was a severe fish kill at the river heads and I'd judge it would take a long period of good rainfall to bring them back.

Most conservationists are strong for an increased flow of fresh water into Everglades National Park,



There is nothing wrong with this bass; a fat rascal that came from a deep canal near Lake Okeechobee, while the drought was still on.



A low water bass, left, in poor condition from roadside canal. This thin specimen has the head of a 3-pounder, but weighs less than two. Drought put him in trouble. A typical FCD canal bass, right. Most of them run less than two pounds, but there are often bigger ones.

highly important to salt water species attracted by brackish areas but, in all fairness, it must be admitted that the fresh water fishing down there isn't very important. Those rivers are readily accessible only by boat and are a long way from roads. Only a handful of fishermen ever bothered with black bass after going that far, a long trip generally meaning bigger game.

When I had a black bass orgy down there several years ago I received a couple of letters from campers who had given it a try at Broad, Lostmans or Shark rivers but it's a long haul down there.

When waters are low, currents slacken and oxygen supplies fall off. That means fish will be looking for cool spots and moving water. When there are springs in lakes or rivers they're likely to be good fishing areas and spring runs are worth a try.

Deep, quiet holes are generally cooler than the shallows but early morning and late evening will find the fish in thin water where it's temporarily cooler.

Warm water bass are usually a little slow moving and even a surface lure is generally more effective when worked slowly. Maybe the ideal bass temperature is in the mid-seventies in Central Florida—at least that's a choice by some experienced guides. Probably the lowest water temperature of bass activity in Florida is in the high forties and when it gets above 90 things knock off too.

Back to the canals: Florida canals rate more pub-

licity than they get. The thousands of miles of drainage, mosquito control and flood control ditches and roadside canals are likely to be good fishing from now on although rivers may be polluted, coastal marshes may be drained and ocean bays pumped in.

Canals and their contents don't offer much opportunity for commercialization. Boat liveries and fishing resorts appear at a few points but many canals can be fished without a boat of any kind and little cartoppers are perfect for most of the others. Speed is a big help sometimes but there's no problem with rough water. All in all the canal is almost sure fire for the tourist armed with anything from a cane pole and worms to the finest light tackle. Guides aren't necessary.

So with very little tourist promotion tied to it and forced to compete with glamorous salt water angling the canals are neglected. Many of the persistent salt water bridge and pier jockeys could catch a lot more pounds of fish in fresh or brackish ditches.

The flood control operations of South Florida may have ruined a lot of fishing but the ditches have made more bass available to more anglers. The mosquito control canals have eliminated a lot of swamp but have substituted some choice angling of their own.

Most canals are only incidentally fishing spots
(Continued on next page)

(Continued from preceding page)

and if fishing were considered in their construction they might be even better. Not all of them could stand too much promotion.

A couple of years ago I caught tarpon after tarpon in a canal at Fort Pierce and had it all to myself while boats crowded the nearby inlet and bridge fishermen hung on the railings and complained nothing was biting.

Some roadside canals hold out permanently. Others fade somewhat after a few years, even as impoundments do.

A ditch running alongside Florida highway No. 29 in the south part of the state has been a bass and bream holder for many years. Last month three of us stopped off at Jane's Restaurant at Copeland after a day's salt water fishing in the nearby Gulf. It was almost dusk and I could see some gentle wakes in the ditch so I cast a popping bug in there. Several bass went for it and I landed one of about a pound, fat and sassy despite prolonged drought and the constant efforts of numerous small boys who continually slosh worms around the place.

There were some bigger fish that wouldn't strike after watching me derrick out their buddy. Apparently that sector of canal holds fresh water fish come high or low water despite regular invasions of salt water snook and lots of small sharks.

The cross-Florida toll road from Naples to Fort Lauderdale, known as "Alligator Alley," was my biggest news in roadside fishing this year. I got the word when motel operators 20 miles from it reported they were entertaining fishermen who spent the days at Alligator Alley.

Most of the fish are fairly small but I'd generally get a 2-pounder or two on artificials on each trip as well as some big bluegills and warmouth and lots of small bass. The canal's deep and new with very little vegetation and it's just an easy cast across. We fished near the Naples end.

Just what areas the ditch drains I wouldn't know but there have been complaints it gets some water from famed Corkscrew Swamp to the north. Early last spring there were panfish beds all along the shore wherever a rock shelf would accommodate them.

Most of our strikes came from the surface but a small, deeply fished spinner fly on light spinning tackle brought up plenty of big bluegills. The biggest bass I saw were around three pounds; there are undoubtedly bigger ones.

Plugging for bass, in the shallows of the upper St. Johns River, was especially hot early this past spring because of the falling water levels.

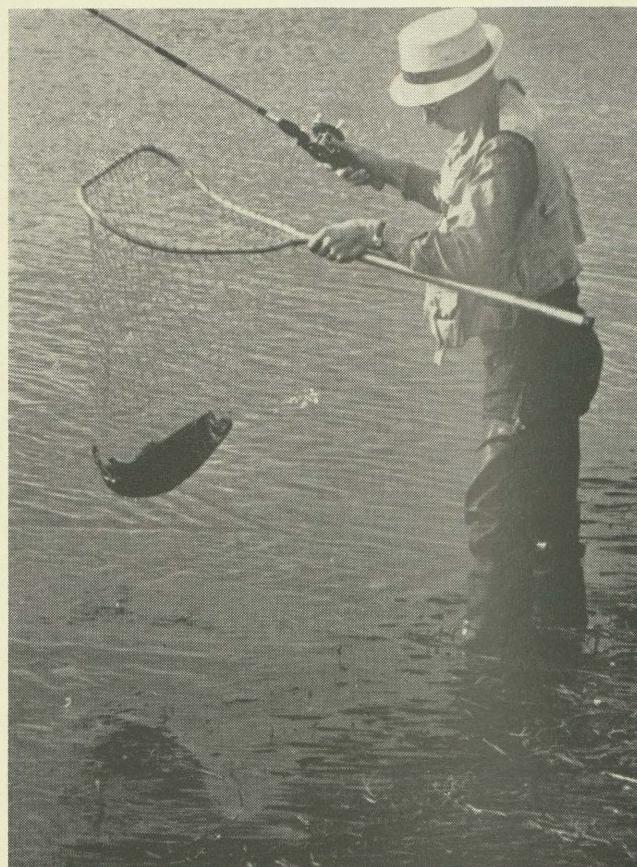
I don't know about future plans for that ditch. The road is still under construction at the east end. I hope that fishing isn't prohibited when it's done. Anyway, it seems to have a balanced population at present. The fish we caught there just before the first spring rains were in good shape after a long drought.

Low water had lots of bearing on fishing in rivers and lakes this year. The upper St. Johns, which is a network of shallow flats and deep runs at high water, turned into scattered pasture creeks in early spring.

As the water receded and fish were first concentrated a great many bass were caught in the Puzzle Lake area near Sanford and I was in on that several times. There were a lot of good fish taken too and in mid-winter there was a flurry of big ones where the river "makes up" into one main stream west of Sanford.

It's no secret that the lower St. Johns has had some fishing troubles blamed on a wide variety of causes but some fishermen believe plenty of water up where the river starts is mighty important to the bass population and they'll argue that upstream water is essential to satisfactory spawning.

No two fishing areas are exactly alike so don't expect fish biologists to have instant solutions. Fabulous fishing comes when things are a little off center. ●





AS THE NUMBER of hunters in Florida increases, so must the acreage under the Game and Fish Commission's public hunt area program. Three new wildlife management areas have been established, two of which will be open for the 1967-68 hunting season, according to the Game Management Division.

The Nassau Wildlife Management Area, located north of Callahan in Nassau County, covers approximately 80,000 acres owned by Rayonier Container Corporation of America, St. Regis Paper Co., Gilman Paper Co., and Continental Can Company. The area is bordered on the north by the St. Mary's River, and will offer deer, turkey and squirrel hunting.

Another, the Fort McCoy Wildlife Management Area, is situated across the Oklawaha River just west of the present Ocala Wildlife Management Area, in Marion County. It consists of about 30,000 acres owned by Ocala Manufacturing Ice and Packing Co., Ocala Lumber Sales Co., and Hudson Pulp and Paper Corporation. (Negotiations are pending that may increase the size of this area.) Good hunting: deer, turkey, quail and squirrel.

The Edward Ball Wildlife Management Area has been established in Gulf County on property owned by St. Joe Paper Company. It lies west of Port St. Joe and surrounds Lake Wimico on the Intracoastal Waterway. Total acreage is about 70,000. This area will be closed to hunting for an indefinite period of time.

EIGHTEEN LARGE alligators were last seen wearing bright, color-coded plastic discs after "volunteering" to assist game biologists Tommy Hines and Mike Fogarty with a research project in Everglades National Park.

The idea is to be able to identify each alligator upon sight; to know its sex and how much traveling it does. The discs should be visible even from aircraft, making it possible to check on nesting activity within the study area with modern ease. The Commission and the U. S. Geological Survey are cooperating in this study.

A NEW BOOK recently published by the Wildlife Society contains a chapter by Game Management Division Chief James A. Powell. Called **THE WILD TURKEY AND ITS MANAGEMENT**, the hardbound, 589-page volume is written in a style that will serve

both the wildlife technician and the sportsman as an authoritative source of information on the history of America's magnificent game bird and its comeback under modern wildlife management practices. The book is profusely illustrated.

Powell's contribution treats the Florida wild turkey and the Eastern turkey in our neighboring states, Georgia and Alabama.

Orders or inquiries about this publication should be addressed to: The Wildlife Society, 3900 Wisconsin Avenue N.W., Washington, D. C. 20016. The cost is \$6.00 per copy.

IF YOU'RE A collector of bugs and snakes; a young person who has always been interested in plant and animal life, then you're very likely a potential wildlife biologist.

High school graduates still looking for career fields—who have natural outdoor interests—are urged to seek consultation on preparation for work in wildlife management. Your biology teacher is a good source of information. Or the Florida Game and Fresh Water Fish Commission. Or a student counselor at either of our state universities. Or The Wildlife Society, 3900 Wisconsin Avenue, Washington, D. C. 20016.

What is game management? Aldo Leopold, the acknowledged "father" of this practice in our country, defined it as ". . . the art of making the land produce sustained annual crops of wild game for recreational use."

Training for wildlife management requires a wide background in the basic sciences: biology, chemistry, physics, mathematics, geology, etc.; in cultural subjects: languages, literature, philosophy, etc.; and in the social sciences: history, economics, civics, etc.

But the work of a wildlife biologist goes far beyond even these. He must be able to communicate his findings, ideas and recommendations to others, else the value of his work is lost. Hence, proficiency in the use of the English language—both spoken and written—is of utmost importance, regardless of the degree obtained. This area of preparation should not be underrated and neglected by the budding biologist.

To be employed as a wildlife biologist by the Game and Fresh Water Fish Commission one must have completed at least four years of college or university undergraduate work leading to a Bachelor of Science degree.

A young person entering the biological field can have his or her choice of dozens of intriguing specialties. Wildlife management is one of the most interesting.

Can you qualify? •



TWO NEW FISH management areas were opened to public fishing in the South Florida Region in June, bringing to 75 the number of such areas open to fishing in the state.

Pioneer Park Lake, in Hardee County, opened to children under 15 years of age for a Saturday fish-a-thon and reopened to the general public the following Monday morning.

Located at Zolfo Springs on the grounds of Pioneer Park, this 12-acre lake was built under a co-operative agreement between the Game and Fresh Water Fish Commission and Hardee County. It was completed in late 1965, stocked with largemouth bass, shellcracker, bluegill and channel catfish, and remained closed to fishing until this spring.

The 40-acre Webb Area Reservoir, located on the Cecil M. Webb Wildlife Management Area, in Charlotte County, followed a similar timetable of development. It also was opened to children first, the public being allowed to fish beginning the following day.

Special daily bag limits apply in both fish management areas. In Pioneer Park Lake they are: largemouth bass—4; and channel catfish—10. In the Webb Area Reservoir the special limits are: channel catfish—10. Bass fishing is closed until around October 1, due to an unusually high bass harvest after the initial opening.

The regular panfish (bream) daily bag limit applies in each area: 50 per day.

CATTLE MAY BE IN for a hyacinth diet if a joint effort of the Lykes Brothers and the Commission works out.

Vernon Meyers, Lakeland biologist, has set up a barrel barrier in the Withlacoochee River near Brooksville designed to direct the hyacinths to a conveyor belt and then into a truck. The load is spread out on an old airport runway for a drying period (one load was experimentally dried in a Dade City concentrate plant dryer). Scooped up, the hyacinths are then run through a chopper.

Before using the hyacinth pulp as feed, citrus molasses is mixed in with the loose chunks.

Cattle in the experiment munch the new product with great gusto and are being weighed to compare gains in weight between the hyacinth mixture and normal cattle foods.

Hopefully, this might be a new use for an old pest.

WITHIN THE Osceola National Forest, east of Lake City, are numerous "borrow" pits. Work of several months has been completed by the Fisheries Division, in co-operation with the National Forest Serv-

ice, in surveying these pits to determine the feasibility of managing them for public fishing in the future. Implementing a long range plan would give the Osceola National Forest a very high potential for "total recreation" the year round. Such a plan has been submitted to the Service for approval. It is hoped, according to Regional Biologist Doug Fletcher, Lake City, that the first stages of work, involving three or four of the more favorable sites, can commence late this summer.

LAKE STONE, a new lake in Escambia County, is headed for completion. Water chemistry is being run, according to a recent report by Regional Biologist Joe Blanchard, of DeFuniak Springs. More than 10 acres of water have already backed up in this badly needed fish management area. The stocking, closing and usual one year "nursing" period will precede the Lake Stone opening, tentatively scheduled for the spring of 1969.

Two Central Region Fisheries Division personnel inadvertently wandered into a "sunshine club" in their search for a publicly owned lake surrounded by private property recently. An "ununiformed" man quickly showed them the way to the gate. The uniformed Commission personnel left hurriedly, but with regret at not having been able to complete their survey of the lake and its "natural" surroundings.

ILLEGAL DREDGE and fill work has increased considerably in the South Florida Region since the water levels in the many lakes are so low. A total of nine such operations were investigated by Biologists Forrest Ware and Jon Buntz in a recent month. Most of them were in connection with irrigation systems going to orange groves. Steps were taken to rectify damage to the lakes. Similar problems were investigated where lake front property owners were found attempting to repair their beaches by pushing fill back up on them with bulldozers, thinking that they were not required to have permits to "improve" the lakes by such earth-moving. Fisheries Division personnel point out that "improvement" is dependent upon the point of view. To spawning fishes dredging and filling operations are far from "improvements" in most cases. All proposed dredging and filling on public lakes must first be approved in writing before it can be legally accomplished. ●

New Gun Models

MUZZLE FLASHES

Mass produced present-day hunting guns are available with a variety of modern changes that can be classed high on the credit side

By EDMUND McLAURIN



PRIOR TO World War II, there was a lot of machine work—as well as hand work—involved in the production of component parts assembled into American-made sporting firearms.

The war production years and steadily rising labor costs changed that manufacturing policy radically. Now, instead of being milled, many component parts, especially non-functioning parts, are being press-stamped.

Gun parts are also being produced by the investment casting process, whereby complicated, yet smoothly finished parts are cast to extremely close tolerances from a variety of alloys on a volume production basis.

Investment casting offers other production economies. The knurled surface on the bolt handle of the Remington 700 series of big game rifles, for example, can be cast right in the metal instead of having to be machined.

Even barrels are now being shaped and rifled by the hammer-forged process. Those that are not are now mostly made by another fast, economical process—the button rifling method which “irons” in the needed rifling grooves.

Expensive hand checkering of gunstocks, except on custom made models, is fast being replaced with pressed-in-the-wood decoration. Once hand-engraved receivers are now generally given a rolled-on type of engraving.

The net result is that old favorites like the Winchester models 71, 61, 63, 62, 12, 97 and the original Model 70; Remingtons 121, 31, 141, 37 and 241, and long popular models in other brand-name lines, have either been dropped entirely or replaced with cheaper to produce models. The rising costs of the

labor required to mill component parts made the much loved old timers too expensive to manufacture and market at a profit.

Taking their places are such firearms models as Winchester models 100, 1400, 1200, 131, 121, 275, 270, 290, 135 and 250 and revamped versions of models 70, 101, 94 and 52; new Remingtons, like the superb Model 700 BDL, the 600 Carbine, and redesigned models 742 and 760; Marlin Model 444; Mossberg's modernized Model 500 and the new Marlin models 98 and 99 .22 caliber carbines; Ruger's fine 10/22 model .22 caliber carbine-style autoloader; the Savage Model 110 bolt action versions in big game calibers; new Weatherby's; Winslow customs and new Brownings, among many new offerings. You can get just about any type action and caliber that you want.

There are more gun owners than before World War II, also more sportsmen now own well-filled gun cabinets instead of a single rifle or shotgun standing in a corner of a closet. More commercial loaded ammunition is used; more home reloading is done, too. Maybe you don't like the changes that have been made in the interests of manufacturing economy, but evidently there are those who do. The new gun models and accessories sell.

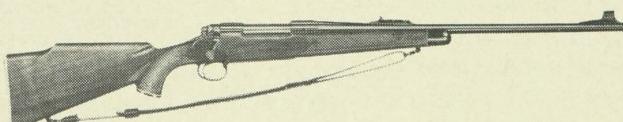
Just how good are some of the recent year firearms introductions? Are the new models as good as some of the discontinued catalog listings?

The answers depend on who is doing the talking and judging. The firearms manufacturers claim that the new models are every bit as good or better than consumer favorites that they used to market. Older group powder burners, who grew up with some of the now discontinued Remington and Winchester rifles and shotguns, say that many modern guns have cheap appearance—numerous stamped parts, imitated checkering and hand engraving, final finish sometimes so poor that tool marks can be

(Continued on next page)



Typical examples of the many economically produced new gun models are the Remington Model 600 Carbine, above, and the Model 700 BDL, right, available in a variety of calibers.



(Continued from preceding page)

seen under it, and frequently encountered sloppy bedding of action to gunstock or rough trigger pull. Younger shooters, purchasing their first sporting big game rifle or shotgun, evidently buy happily, either unaware or not caring about argued quality differences between today's and yesteryear's wares.

Here we find three different schools of thought, each with conclusions influenced by individual approach to a common subject; each logical by certain criteria, yet failing to mirror the whole picture. . . .

Take the Winchester Model 70 bolt action big game rifle and the Winchester Model 94 lever action .30-30, for examples: For many years, the Winchester was rated by experts as the best bolt action sporting rifle made; the Model 94 was undisputedly the best selling hunting rifle, among all makes. Shooters loved both!

Then Winchester decided to revamp the Model 70 and the Model 94, for reasons of more economical production.

Barrels of the Model 70 were ordered made by the hammer-forged process, which—to the credit of Winchester—produced very smooth, highly polished, accurate rifle bores. The old gas escape hole in the bolt of the original Model 70 was left out in the new manufacture and the cocking piece protectively covered with a metal shield. Imbedded barrel was free floated instead of being pulled down in stock by a fore-end screw. The rifle's bolt was streamlined, made stronger and better.

But on the stock design revamping Winchester initially erred. The new version appeared with a more flattened fore-end, an incorporated cheek piece so thin that its practical value was questionable, and the newly designed grip was too small and too short for comfortable handfit of the average shooter. For the long-loved, very practical and handsome checkering formerly given Model 70 stocks, the manufacturer substituted inverted,

pressed-on stock decoration, that fails to provide any sure finger gripping surface.

The net result was a howl from shooters long in love with the original Model 70—so loud in volume and from so many different directions that Winchester promptly worked up a better designed gunstock substitution. Even so, many shooters have maintained a preference for the original Model 70's stock features. Old style models have suddenly become very valuable on the gun-trade market.

The same holds true of the Winchester Model 94. There are shooters who don't want—or simply cannot accept—an old favorite with substituted stamped parts for milled components. Old Model 94's have gone up in value, too, by reason of the thusly created specialized demand.

While lack of old-time hand checkering and walnut wood quality may be decried, some of the finishes put on our modern guns are undeniably tough. The DuPont developed RK-W finish which Remington now uses is particularly durable as well as being more waterproof.

Also on the credit side of changes made is the inclusion of a recoil pad on many of the new gun models. Anything that helps the shooter to be less conscious of gun recoil is an aid to good shooting. A recoil pad does just that.

Ammunition has also been improved. Powders are better; achieved accuracy is generally better, whatever the brand of ammunition used. The .270 caliber, for example—always a good performer since its introduction in 1925—shoots better than ever with modern powders and bullets. Winchester's "Mark V" labeled buckshot loads group much tighter than buckshot loads of yesteryear, especially in No. 1 size. The same improvement trend holds true of other types of sporting ammunition.

Generally speaking, and despite some justified criticisms, today's mass produced firearms shoot far more accurately than most shooters can hold and align them for aimed fire. ●

Migratory Game Bird Hunting Seasons

Mourning Dove — (three phase) October 7 through November 5*

November 18 through December 3

December 16 through January 8

*During the Oct. 7-Nov. 5 season, Alligator Point, Franklin County, Northwest Region, will be closed to dove hunting

Daily Bag Limit 12; Possession Limit 24

Shooting Hours: From 12-noon to sunset

Marsh Hens (Rails and Gallinules)

Season: September 16 through November 24

Daily Bag Limit 15; Possession Limit 30

Shooting Hours: One-half hour before sunrise to sunset

Snipe — Season: November 11 through December 30

Daily Bag Limit 8; Possession Limit 16

Shooting Hours: One-half hour before sunrise to sunset

Woodcock

Seasons: November 18 through January 14, Northwest Region

November 11 through January 14, all other regions

Daily Bag Limit 5; Possession Limit 10

Shooting Hours: One-half hour before sunrise to sunset

The Snapping Turtle

By GENE SMITH

THE NAME "snapping" turtle was not lightly chosen. It designates an ill-natured, big-headed, long-tailed Florida turtle that would almost certainly seize an opportunity to strike at a passing locomotive! Yet for all his brutishness he is an interesting species to know.

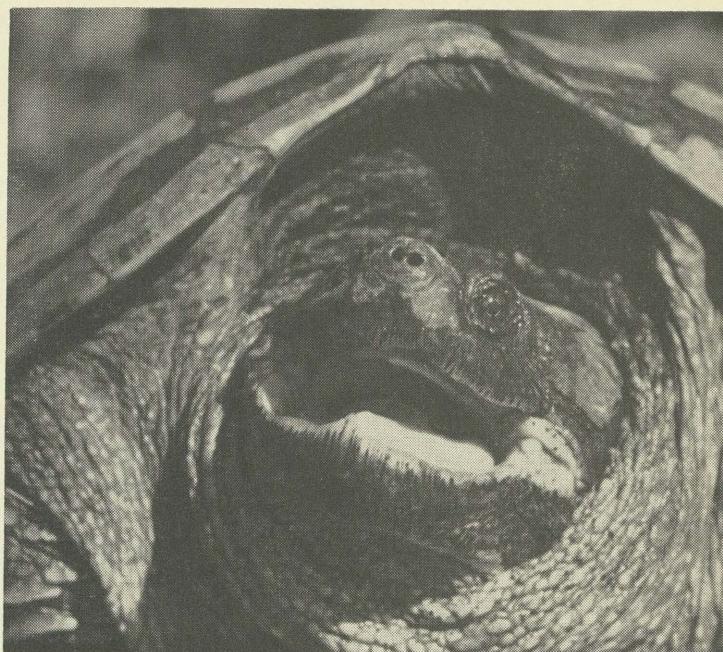
Likely to be found in any permanent body of fresh water, large or small, the Common Snapping Turtle (*Chelydra serpentina serpentina*) is not often seen out of the water. In fact, he rarely even basks in the sun in the manner of many other turtles. It's probably best this way. Usually harmless in the water—even if stepped on—he will take the offensive when encountered on land, striking viciously and repeatedly at any supposed source of danger.

The adult ranges in size from 10 to 70 pounds, though captive specimens may occasionally be heavier. (This species should not be confused with the Alligator Snapping Turtle, found in North Florida rivers, which may top 200 pounds.)

The snapper's ugliness alone is almost an identifying characteristic but look for 3 keels, or ridges along the length of his shell (prominent in the young but only lightly defined in older turtles). He also has dragon-styled "sawteeth" along the upper side of the trail, which sets him apart from all similar species including the smooth-tailed Alligator Snapper.

Foods of the Common Snapping Turtle include fishes, snakes, frogs, birds, rats, insects, carrion and a considerable amount of vegetation.

The Common "Sawtooth" Snapper



Photos By Leonard Lee Rue III

Not even a mother "could love this." The Snapping Turtle lays and abandons her eggs; the young snappers are self-supporting.

Females leave the water to lay their eggs, sometimes rambling long distances over land before selecting a "nursery" of their liking. The round, white eggs are laid in a shallow hole dug by Mrs. Turtle in loose sand or other soil. They are covered and the site is neatly smoothed again so that it appears never to have been disturbed.

The young snappers will hatch and free themselves unaided and then travel to water, most often the same lake or stream in which "Mamma" makes her home. They are self-supporting from the very beginning, however, and may never see their parent. They will feed on tadpoles, minnows, insect larvae and other similar foods.

Snapping turtles are found over much of North America—from southern Canada to the Gulf and from the Atlantic to the Rockies. One subspecies occurs only in peninsular Florida. It is the Florida Snapping Turtle (*Chelydra serpentina osceola*), which is only slightly different from the common variety.

Taken as an important commercial food crop in some parts of its range, the snapper is not particularly important commercially in Florida. It does wind up in many a delicious soup and stew, though, and is considered a real delicacy by many.

Care should be exercised when capturing and handling a snapping turtle. One look at his "hardware" should tell why. But one must even be cautious while dressing a carcass for the table, usually decapitated as the first order of business: the severed head of a snapping turtle remains fully capable of "snapping" off a finger or toe for a considerable length of time. ●

CONSERVATION SCENE

(Continued from page 4)

on S.785 by Senator George A. Smathers (Fla.) which would "prohibit the transportation and shipment in interstate or foreign commerce of alligators and alligator hides taken in violation of federal or state laws." S.785 would be an amendment to the famed Lacey Act of 1900, the act that gave hard-pressed state wildlife agencies the extra enforcement help they needed to end destructive market hunting.

Swampland drainage and development also are reducing alligators by destroying their habitat. But the largest inroads by far, the state wildlife agencies say, are being made by hide hunters. The improved level of enforcement against poachers and hide buyers, made possible by the enactment of S. 785, the wildlife agencies say, would close this harmful loophole and protect a valuable form of native American wildlife.

Traditional Seminole Chickee

A SEMINOLE CHICKEE has been added to the landscape at the Florida Audubon Society's headquarters at Maitland, according to a recent Audubon news release.

The job of construction was completed by a group of Seminoles from Brighton Indian Reservation under the direction of Reverend Billy Osceola.

The building of a chickee (pronounced chickEE) is one of the outstanding traditional skills of the Seminoles. The structure, which is uniquely adapted to South Florida weather, consists of a frame—of pond cypress logs and poles—supporting a roof thatched with the fan-shaped leaves of our state tree, the sabal palmetto.

In a Seminole encampment chickees serve as living quarters as well as "kitchens" sheltering cooking fires built on the bare ground.



Summer vacationists continue to enjoy many types of outdoor recreation offered by State Parks located throughout Florida. Camping areas, similar to this view in Gold Head Branch (Keystone Heights), are prime family attractions in more than 20 state parks, with a total of over 2,000 available sites. See page 11.

The Florida Audubon Society feels that the Seminole Indian chickee is an appropriate addition to its headquarters since it focuses the attention of visitors on the skills and rich nature lore of the Seminoles and might bring about a closer relationship in the work of natural resource conservation.

Falling Waters Camping Area

A 16-site camping area at Falling Waters State Park near Chipley has been completed and opened to the public. Located in a wooded section of the 155-acre park, the camping area provides each camp site with picnic tables, barbecue grills, and electrical hook-ups for travel trailers. The campers' restroom building is equipped with showers, lavatories and laundry tubs.

Completion of the camping area gives Florida State Parks a total of 24 parks that offer camping, with a combined 2,222 camp sites.

The campground was part of a \$62,000 construction program for Falling Waters during the 1965-

1967 biennium. Other facilities added under this program were a pond formed from several native springs to control the flow of water over the falls, an entrance station, and an equipment shelter and shop.

Falling Waters gains its name from a rare Florida waterfall in a scenic setting of nature trails. The park grounds are honeycombed with deep limestone caverns and caves.

College Marksmanship Program

COLLEGE AND university shooting programs can now obtain increased aid in equipment and ammunition supplies under new regulations announced by the Department of the Army's civilian marksmanship office.

The revised policy offers colleges nearly double the allotments of rifles and range ammunition which is made available to private gun clubs through the office of the Director of Civilian Marksmanship.

Designed to expand the DCM program on the college level, the

new provisions were announced following a tour of Indiana University and other colleges which have initiated shooting activities as part of their outdoor education and recreation programs. The shooting program at Indiana University was initiated and is maintained under a grant from the National Shooting Sports Foundation.

In order to qualify for acceptance in the DCM program, colleges must affiliate their shooting activity with the National Rifle Association gun club program, unless the activity is part of the school's curriculum. A minimum of 10 members age 19 or over is required for classification as a senior DCM club. The program must also have access to range facilities and list a member of the college staff on its roster.

The DCM has also relaxed requirements on the filing of membership rosters, permitting colleges to apply for ammunition and equipment based on estimated enrollment in the shooting course and the number of range firing points available. All members of the course are required to complete an approved course of fire to obtain further issues of ammunition, but they are not required to actually fire a qualifying score.

Schools can obtain all the necessary application forms by writing to the Director of Civilian Marksmanship, Department of the Army, Washington, D. C. 20315. In operation since 1903, the DCM now aids more than 380,000 firing members.

Florida Recreation Director

GOVERNOR-APPOINTED recreation officials of the 50 states and representatives of Guam, Samoa, Puerto Rico, the Virgin Islands and Washington, D. C. formed an organization at a meeting in Denver May 24 to work with the Federal Bureau of Outdoor Recreation (BOR).

The new National Association of State Outdoor Recreation Liai-

son Officers (NASORLO) makes possible a unified advisory group to represent state and local interests in administration of the Land and Water Conservation Fund Program, which provides money for acquisition and development of recreation land and facilities.

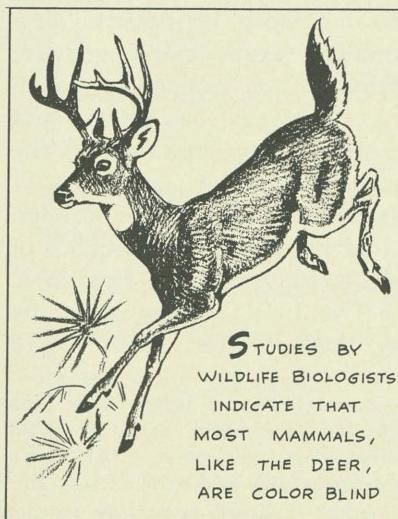
President of the organization is Dr. Ralph A. MacMullan, Director of the Michigan Department of Conservation. Other officers: Ney C. Landrum, Director, Florida Outdoor Recreational Planning Committee, first vice president; William Penn Mott, Jr., Director, California Department of Parks and Recreation, second vice president; James J. O'Donnell, Director, Maryland State Planning Department, secretary-treasurer.

Space Center Outdoor Program

EXPANSION of land and water areas for controlled public use on the Kennedy Space Center in Florida was announced recently by the Department of the Interior's Bureau of Sport Fisheries and Wildlife and the National Aeronautics and Space Administration.

The Center will add 11,436 acres of its area to territory managed by Sport Fisheries and Wildlife under a land-use agree-

Nature Notes



ment. The added public-use acreage encompasses land and water areas, including Mosquito Lagoon from Haulover Canal southward, within the Merritt Island National Wildlife Refuge.

Some of the beach in this area will be managed by Florida's Brevard County Commission, under a separate agreement with NASA, to continue the Playalinda Beach program conducted by the county.

The Bureau operates the Merritt Island National Wildlife Refuge and permits hunting during the waterfowl season. Areas of the refuge are also open to fishing. Mosquito Lagoon has long been popular for trout and redfish angling and for duck shooting. Refuge Manager Curtis Wilson will announce the Bureau's program for public use of the lagoon.

This addition makes almost 58,000 acres of NASA-controlled area at the Kennedy Space Center available for use by the public under programs managed by the Bureau of Sport Fisheries and Wildlife.

Sunshine State DU Chairman

DUCKS Unlimited, Inc., the continent's pioneer waterfowl conservation organization, today announced the appointment of Thomas C. Knowles, of Winter Haven, as Florida State Chairman. Mr. Knowles takes over the reins of the Sunshine State group from James Stockton, Jr., of Jacksonville, who is stepping down from the post after several years of dedicated service, due to the press of business.

Mr. Knowles is one of the Southland's best known sportsmen and conservationists. He is associated with Southern Gun Distributors, of Miami, and travels extensively throughout the state. Knowles is Vice President of the Winter Haven Skeet Club and is active in a number of other civic and sportsmen's clubs in the Central Florida area.

(Continued on next page)

(Continued from preceding page)

The new state chairman was selected for the important position by the Florida State DU Committee and approved by the conservation organization's National Headquarters.

In accepting the appointment, Mr. Knowles pointed to the work of Mr. Stockton, in these words: "Jim Stockton is one of our state's most dedicated sportsmen-conservationists. His advice and continued effort on behalf of DU will play a big part in the successful expansion of our Ducks Unlimited programs across Florida."

Stockton will serve as Jacksonville area Chairman for DU. Mr. Knowles immediately began an aggressive program of establishing working area committees in several different parts of the state.

In announcing the appointment of Knowles, Ducks Unlimited's Executive Vice President, Dale E. Whitesell, noted that Florida has the potential to become one of the biggest supporters of Ducks Unlimited programs in Dixie. While almost 25,000 sportsmen hunt waterfowl in Florida each

year, only about 100 of these contributed to DU's important "duck factory" projects in Canada during 1966. Whitesell urged each and every duck hunter in the Sunshine State to accept the responsibility of helping to preserve our continent's waterfowl resources. Membership contributions of \$10 or more may be sent directly to the new Florida State Chairman, Thomas C. Knowles, 1100 West Lake Buckeye Drive, Winter Haven, Florida 33880.

Corkscrew Swamp Sanctuary

THE NATIONAL Audubon Society, aided by a grant from the Ford Foundation, has committed well over half a million dollars to save the Corkscrew Swamp Sanctuary, near Naples, from the effects of land reclamation activities in South Florida.

According to C. Russell Mason, Executive Director of the Florida Audubon Society, the sanctuary's vital water supply is clearly threatened. In emergency action to reduce this threat some 2,000 acres of land adjacent to Corkscrew Swamp has been purchased

so that it will not be drained. Dikes are being built to retain the precious fresh water supply.

The cost of the drive to save the Corkscrew is \$698,000, more than \$200,000 of which is still needed if the National Society is to recoup reserve funds spent, match remaining Ford Foundation money and continue its other conservation work.

The Corkscrew Swamp Sanctuary's water level is dangerously low, says a recent Florida Audubon Society news release, and last year it became clear that the swamp would dry up unless the emergency program was undertaken.

There are cypress trees in Corkscrew Swamp believed to be 700 years old, and a profusion of sub-tropical plant, animal and bird life found in no other part of the United States. Thousands view these unique natural attractions each year from a boardwalk built to provide easy access.

Contributions to the drive to "Save the Corkscrew" should be sent to the National Audubon Society, 1130 Fifth Avenue, New York, N. Y. 10028. ●

DIMENSIONS OF CONQUEST

(Continued from page 5)

supply. Need became the creator of many goods, of new inventions and improved transportation. New world exploration not only called for talents of the resolute and intrepid, but provided a whole new field of opportunity that stretched from the farm and the woodlands to the waterfront. There was need for shipbuilders, chandlers, sailors, merchants and artisans. Many a peasant boy caught the scent of sea water and ran away to become a cabin boy and to dream of future fame. European economics began to expand as never before and for centuries following, the resources of the Old World were searched out and converted to products that would help conquer the New.

What the findings of new continents did to Europe from the standpoint of economic growth was secondary only to the discovery itself.

The impact of the discovery brought convulsions to both the New and Old World by way of wars on both continents. New continents were something to reconnoiter and pillage—an attitude, it might be added—that prevailed up to the time of the Second World War.

It took 300 years of exploration to find the length and breadth of the North American Continent. The Twentieth Century was on its way before the Arctic land

masses beyond the northern limits of Canada were given full dimensions.

Exploitation of North America commenced when the first white man set foot on the continent: that is what he came for. Others followed for the same purpose. At a later date still others crossed the Atlantic for religious or political freedom; and from then on a thin stream of immigrants swelled into millions who wanted to escape the dread tyranny of imperial bureaucracy and ecclesiastical regimentation.

The majority of the latter were content to put down roots on a modest homestead, or to establish a business or follow a trade. Equal to all other desires they wished to preserve the dignity of man. Each was looking for his particular rainbow. ●

If you are planning to move, please send notification four weeks before changing address. Send your address label from a current issue, plus your NEW address. This will ensure continued subscription service.

For that BIG ONE that didn't get away



ELIGIBILITY REQUIREMENTS SPECIES

LARGEMOUTH BASS

..... 8 pounds or larger

CHAIN PICKEREL

..... 4 pounds or larger

BLUEGILL (BREAM)

..... 1 1/2 pounds or larger

SHELLCRACKER

..... 2 pounds or larger

BLACK CRAPPIE

..... 2 pounds or larger

RED BREAST

..... 1 pound or larger

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fishing tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

FLORIDA WILDLIFE'S FISHING CITATION

is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon receipt of the following application form that has been properly filled out and signed.

Only fishing citation applications received within 90 days from date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE
Game & Fresh Water Fish Commission, Tallahassee, Fla.

Date _____

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print) _____

Address _____

City _____ State _____ Zip No. _____

Species _____ Weight _____ Length _____

Type of Tackle _____

Bait or Lure Used _____

Where Caught _____ in _____ County _____

Date Caught _____ Catch Witnessed By _____

Registered, Weighed By _____ At _____

Signature of Applicant _____

CUT OUT AND SAVE THIS APPLICATION BLANK



Night Heron (immature)

Wildlife Portrait By Jerry Focht
Leonard Rue Enterprises

FLORIDA WILDLIFE Magazine
Game & Fresh Water Fish Commission
Tallahassee, Florida 32304

SUBSCRIBE NOW

The Florida Magazine For ALL Sportsmen

please print or type

Name _____

Street No. _____

City _____

State _____ Zip Code _____

Florida
WILDLIFE

12 Issues	\$2.50
24 Issues	\$4.75
36 Issues	\$6.25